McKinsey Global Institute

March 2011

Urban world: Mapping the economic power of cities

The McKinsey Global Institute

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MGI is led by three McKinsey & Company directors: Richard Dobbs, James Manyika, and Charles Roxburgh. Susan Lund serves as MGI's director of research. MGI project teams are led by a group of senior fellows and include consultants from McKinsey's offices around the world. These teams draw on McKinsey's global network of industry and management experts and partners. In addition, MGI works with leading economists, including Nobel laureates, who act as advisers to MGI projects.

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Preface

The world is in the throes of a sweeping population shift from the countryside to the city. The global urban population is growing by 65 million annually, equivalent to adding seven new Chicagos a year.[1] And for the first time in history, more than half of the world's population is now living in towns and cities. Underpinning this transformation are the economies of scale that make concentrated urban centers more productive. This productivity improvement from urbanization has already delivered substantial economic growth and helped radically reduce poverty in countries such as China. The expansion of cities has the potential for further growth and poverty reduction across many emerging markets. Urbanization will be one of this century's biggest drivers of global economic growth.

Urbanization and the role of cities in the global economy is therefore a core research area for MGI. Our recent analysis of cities includes research on China's urbanization whose early findings we published in 2008 and full findings in March 2009 in the report *Preparing for China's urban billion*. We launched a second report, *India's urban awakening: Building inclusive cities, sustaining economic growth*, in April 2010. We have also been analyzing growth prospects and the role of cities in Latin America and will shortly publish a new report *Building globally competitive cities: The key to Latin American growth*. This latest report *Urban world: Mapping the economic power of cities* builds on this body of work to provide a global view of the economic role of cities. Our findings draw on the MGI Cityscope, a global database of more than 2,000 cities that brings together our regional research on cities. The database today allows us to offer insights into the evolution of the global economy and its demographics, household structure, and incomes. Projecting the economic and demographic evolution of cities over the next 15 years is inherently subject to multiple sources of uncertainty. We present in this report one scenario of how the urban world is evolving that provides a sense of direction to companies and policy makers. Companies need to test the robustness of their business decisions against a broader set of plausible scenarios. In the future, we will continue to broaden the scope of the MGI Cityscope to cover areas such as infrastructure investment, consumer demand and savings, and industry evolution.

McKinsey directors Richard Dobbs and Sven Smit and MGI senior fellow Jaana Remes led this project. Alejandra Restrepo managed the project team, which comprised Roberto Duran-Fernandez, Lucia Fiorito, Sidhanth Kamath, and Jens Woloszczak. The team also benefited from the contributions of Lydia Guo, MGI knowledge operations manager; Janet Bush, MGI senior editor, who provided editorial support; Rebeca Robboy, MGI external communications manager; Julie Philpot, MGI editorial production manager; Marisa Carder and Therese Khoury, visual graphics specialists; and Elliot Cravitz, Kelly McLaughlin, and Mary Reddy for their help on our interactive materials.

1 United Nations, *World Urbanization Prospects*.

We are grateful for the vital input and support of numerous MGI colleagues past and present and to McKinsey colleagues around the world, including Dominic Barton, Shannon Bouton, Kelly Brennan, Andres Cadena, Nicola Calicchio Neto, Alberto Chaia, Georges Desvaux, Martin Elling, Heinz-Peter Elstrodt, Julian Ferris, Alan FitzGerald, John Forsyth, Shishir Gupta, Stefan Heck, Jimmy Hexter, Rogerio Hirose, Trond Riiber Knudsen, Eric Labaye, Nicolas Leung, Xiujun Lillian Li, Michael Lierow, Anu Madgavkar, Max Magni, Vik Malhotra, Jan Mischke, Laxman Narasimhan, Gordon Orr, Luiz Pires, Sunali Rohra, Shirish Sankhe, Bruno Silva, Vivien Singer, Samantha Test, Ireena Vittal, Arend Van Wamelen, Jonathan Woetzel, and Adil Zainulbhai.

Distinguished experts outside McKinsey provided invaluable insights and advice. We would particularly like to thank our academic advisers Daron Acemoglu, Elizabeth and James Killian Professor of Economics at the Massachusetts Institute of Technology; Professor Ricardo Hausmann, Director of the Center for International Development and Professor of the Practice of Economic Development at Harvard University; and Michael Storper, Professor of Regional and International Development at the University of California in Los Angeles.

This report contributes to MGI's mission to help global leaders understand the forces transforming the global economy, identify strategic locations, and prepare for the next wave of growth. As with all MGI research, we would like to emphasize that this work is independent and has not been commissioned or sponsored in any way by any business, government, or other institution.

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March 2011

The City 600 today . . .*

1.5 billion
people live in these 600 cities—
22 percent of global population

$30 trillion
of GDP in 2007—more than half of
global GDP

485 million
households, with average per capita GDP of

$20,000

The top 100 cities generated

$21 trillion
of GDP in 2007—38 percent
of the global total

* The City 600 are the top 600 cities by contribution to global GDP growth from 2007 to 2025.

. . . and tomorrow

2.0 billion
people will live in these 600 cities in 2025—
25 percent of the global population

$64 trillion
of GDP in 2025, nearly
60 percent of global GDP

735 million
households will live in these cities, with
average per capita GDP of **$32,000**

. . . of which

235 million
households in developing world
cities will have income above
$20,000 per annum

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Executive summary

We live in an urban world. Half of the world's population already lives in cities, generating more than 80 percent of global GDP today. But the urban economic story is even more concentrated than this suggests. Only 600 urban centers, with a fifth of the world's population, generate 60 percent of global GDP. In 2025, we still expect 600 cities to account for about 60 percent of worldwide GDP—but the cities won't be the same. The earth's urban landscape appears to be stable, but its center of gravity is shifting decisively, and at speed. Companies trying to identify the most promising growth opportunities need to be able to map this movement and spot the individual cities where their businesses are most likely to thrive.

Today, major urban areas in developed regions are, without doubt, economic giants. The 380 developed region cities in the top 600 by GDP accounted for 50 percent of global GDP in 2007, with more than 20 percent of global GDP coming from 190 North American cities alone. The 220 largest cities in developing regions contributed another 10 percent—China's cities generated 4 percent and Latin America's largest cities another 4 percent. Across all regions, 23 megacities—metropolitan areas with ten million or more inhabitants—generated 14 percent of global GDP in 2007.

Over the next 15 years, the makeup of the group of top 600 cities will change as the center of gravity of the urban world moves south and, even more decisively, east. One of every three developed market cities will no longer make the top 600, and one out of every 20 cities in emerging markets is likely to see its rank drop out of the top 600. By 2025, we expect 136 new cities to enter the top 600, all of them from the developing world and overwhelmingly (100 new cities) from China. These include cities such as Haerbin, Shantou, and Guiyang. But China is not the only economy to contribute to the shifting urban landscape. India will contribute 13 newcomers including Hyderabad and Surat. Latin America will be the source of eight cities that include Cancún and Barranquilla.

Yet for companies looking for growing markets, locating the most promising cities requires yet another lens beyond just the top cities. To position their portfolios, they should be looking for those urban markets that are likely to contribute most to global growth. For McKinsey's granularity of growth research has shown that the underlying growth (or growth momentum) of the markets where a company's business portfolio is positioned explains two-thirds of that company's revenue growth; only 4 percent of revenue growth comes through gaining share in existing markets.[2] A growing market offers opportunities for incumbents and newcomers alike, and companies that position themselves effectively in fast-growing urban markets are likely to outperform their peers.

The top 100 cities ranked by their contribution to global GDP growth in the next 15 years—we call this group the City 100—will contribute around 35 percent of GDP growth to 2025. And the top 600—the City 600—will generate 60 percent of global

2 Mergers and acquisitions explain the remaining 30 percent. For more detail, see Mehrdad Baghai, Sven Smit, and Patrick Viguerie, "The granularity of growth," *The McKinsey Quarterly*, May 2007 (www.mckinseyquarterly.com).

GDP growth during this period. The importance of the City 600 is demonstrated by the fact that we estimate that the next 400 cities ranked by their contribution to global growth add only about 6 percent on top of the contribution of the City 600. Faster growth in per capita GDP, even more than population growth, is driving the economic expansion of these urban regions. We expect the combined GDP of the City 600 to increase by $34 trillion from 2007 to 2025.[3]

Looking for growth gives us a dramatically different list of target cities. This group includes around 230 cities that do not make it into today's top 600, all of them emerging region cities with current populations of between 150,000 and ten million inhabitants, the so-called *middleweight* cities.[4] These middleweights include many relatively unfamiliar cities such as Ahmedabad, Huambo, Fushun, Medan, and Viña del Mar. We expect the 216 Chinese cities in the City 600 alone to contribute nearly 30 percent of global growth between 2007 and 2025 compared with 3 percent generated by cities in India, which is at a much earlier stage of its urbanization. But it would be a mistake to assume that the growth story lies exclusively in emerging markets—98 rapidly growing North American cities will contribute almost 10 percent of global growth in this period.

Companies now need to ask themselves which cities, and where, will offer the most promising prospects for each of their businesses and how they can best position themselves to capture these market opportunities through their activities and relationships. The fact that many of the new urban economic dynamos entering the City 600 over the next 15 years are not household names underscores the need for companies to look at the world's economic geography at a granular level of detail. Projecting the economic and demographic evolution of cities over the next 15 years is inherently subject to multiple sources of uncertainty and companies need to test the robustness of their business decisions against a broader set of plausible scenarios.

For policy makers, understanding the shifting gravity of the global urban landscape is equally valuable. Our projections describe the urban trends that we expect to unfold from today's environment, but the growth and prosperity of cities critically depend on the way the evolving challenges of cities are managed. Policy makers who anticipate urban trends will not only be better prepared to respond to the increasing complexity of larger cities but can use effective planning and management to help boost the growth prospects of their urban regions. Moreover, diplomatic efforts in support of business need to evolve to reflect the shifting urban world. For embassies, consulates, and high commissions to support their nations' trade interests more effectively, they need to move away from networks of embassies designed around the world as it was in the late 20th century to identifying which cities are likely to shape the 21st century. As illustration, take Wuhan in China that we expect to deliver more than ten times the GDP growth of Auckland. But most countries have an order of magnitude more diplomats in Auckland than they have in Wuhan—if they have any at all in the latter.

Until now, a lack of global data at the city level has prevented companies and policy makers from tracking the evolving role of cities in the global economy and positioning their business and policy activities accordingly. To help close this "white space" in our

3 We measure GDP at a predicted real exchange rate (RER). Please see the appendix for more detail.

4 We divide the middleweights into three categories based on population size. Large middleweights have populations of five million to ten million, midsize middleweights two million to five million, and small middleweights 150,000 to two million.

understanding of the global economy, the McKinsey Global Institute (MGI), McKinsey & Company's business and economics research arm, has built on its extensive body of research on the urbanization of China, India, and Latin America to develop the MGI Cityscope, a database of more than 2,000 metropolitan areas around the world that we believe is the largest of its kind.[5] By analyzing demographic, income, and household trends in these cities, the database offers actionable insights on the choices facing companies looking for new markets and policy makers seeking to improve their urban management and the alignment of their diplomatic efforts with their countries' trade interests. Exhibit E1 shows the top 25 urban areas on a number of key measures included in the MGI Cityscope.

Exhibit E1

Top 25 hot spots by 2025

Cityscope 2025 city rankings

Bold text Developing regions
Normal text Developed regions[1]

Rank	GDP[2]	Per capita GDP[2]	GDP growth[2]	Total population	Children[3]	Total house-holds	Households with annual income over $20,000[4]
1	New York	Oslo	**Shanghai**	Tokyo	**Kinshasa**	Tokyo	Tokyo
2	Tokyo	**Doha**	**Beijing**	**Mumbai**	**Karachi**	**Shanghai**	New York
3	**Shanghai**	Bergen	New York	**Shanghai**	**Dhaka**	**Beijing**	London
4	London	**Macau**	**Tianjin**	**Beijing**	**Mumbai**	**São Paulo**	**Shanghai**
5	**Beijing**	Trondheim	**Chongqing**	**Delhi**	**Kolkata**	**Chongqing**	**Beijing**
6	Los Angeles	Bridgeport	**Shenzhen**	**Kolkata**	**Lagos**	New York	Paris
7	Paris	Hwasŏng	**Guangzhou**	**Dhaka**	**Delhi**	London	Rhein-Ruhr
8	Chicago	Asan	**Nanjing**	**São Paulo**	**Mexico City**[5]	**Mumbai**	Osaka
9	Rhein-Ruhr	San Jose	**Hangzhou**	**Mexico City**[5]	New York	**Delhi**	**Moscow**
10	**Shenzhen**	Yŏsu	**Chengdu**	New York	**Manila**	**Mexico City**[5]	**Mexico City**[5]
11	**Tianjin**	Calgary	**Wuhan**	**Chongqing**	Tokyo	Rhein-Ruhr	Los Angeles
12	Dallas	**Al-Ayn**	London	**Karachi**	**Cairo**	Paris	**São Paulo**
13	Washington, D.C.	Edinburgh	Los Angeles	**Kinshasa**	**Lahore**	**Kolkata**	Seoul
14	Houston	Charlotte	**Foshan**	London	**São Paulo**	**Lagos**	Chicago
15	**São Paulo**	San Francisco	**Taipei**	**Lagos**	**Kabul**	Osaka	Milan
16	**Moscow**	Durham	**Delhi**	**Cairo**	**Buenos Aires**	**Dhaka**	**Mumbai**
17	**Chongqing**	Ulsan	**Moscow**	**Manila**	**Luanda**	**Tianjin**	**Cairo**
18	Randstad	Washington, D.C.	**Singapore**	**Shenzhen**	London	**Shenzhen**	**Hong Kong**
19	**Guangzhou**	Boston	**São Paulo**	Los Angeles	Los Angeles	**Moscow**	**Taipei**
20	**Mexico City**[5]	Belfast	Tokyo	**Buenos Aires**	**Colombo**	**Chengdu**	Randstad
21	Osaka	New York	**Shenyang**	**Rio de Janeiro**	**Baghdad**	**Cairo**	**Shenzhen**
22	Philadelphia	**Grande Vitória**	**Xi'an**	**Tianjin**	**Shanghai**	**Rio de Janeiro**	**Istanbul**
23	Boston	Canberra	**Dongguan**	Paris	Paris	**Wuhan**	**Delhi**
24	San Francisco	Seattle	**Mumbai**	**Jakarta**	**Jakarta**	Los Angeles	**Buenos Aires**
25	**Hong Kong**	Zurich	**Hong Kong**	**Istanbul**	**Istanbul**	**Buenos Aires**	Madrid

1 Developed regions comprise the United States and Canada, Western Europe, Australasia, Japan, and South Korea.
2 GDP, per capita GDP in 2025, and GDP growth 2007 to 2025 in predicted real exchange rate.
3 Population below age 15.
4 Households with annual incomes greater than $20,000 in purchasing power parity (PPP) terms.
5 Mexico City Metropolitan Region.
NOTE: For metropolitan regions, we use the first name of the region: e.g., New York for New York-Newark.
SOURCE: McKinsey Global Institute Cityscope 1.0

5 This analysis includes all cities with populations of 150,000 or above in Western Europe and the United States, and cities with populations of 200,000 and above in the rest of the world. We describe all those below these thresholds as small cities, which form part of a small cities and rural areas grouping. For more on our regional perspectives, see *Preparing for China's urban billion*, March 2009; *India's urban awakening: Building inclusive cities, sustaining economic growth*, April 2010 (www.mckinsey.com/mgi). A new report on Latin America, *Building globally competitive cities: The key to Latin American growth* will be published in 2011.

Other findings that emerge from our analysis include:

- Until now, a company strategy focused on developed economies together with emerging market megacities has made sense for many businesses—this combination generates more than 70 percent of global GDP today. But these regions and very large cities in developing economies are likely to generate only an estimated one-third of global growth to 2025. A strategy focused on this combination will be insufficient for companies seeking to position their portfolios for growth.

- Contrary to common perception, megacities have not been driving global growth for the past 15 years. In fact, many have not grown faster than their host economies, and we expect this trend to continue. We estimate that today's 23 megacities will contribute just over 10 percent of global growth to 2025, below their 14 percent share of global GDP today.

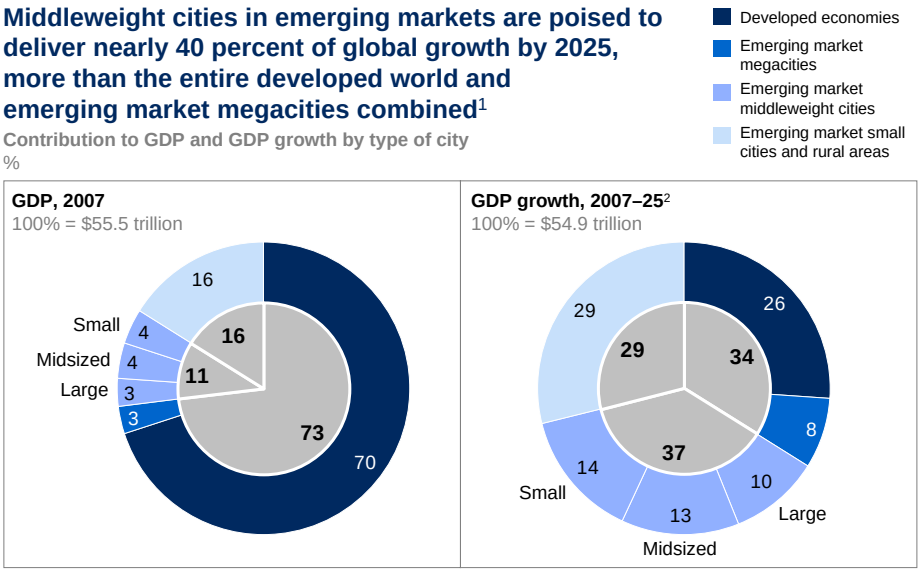
- Instead, we see the 577 fast-growing middleweights in the City 600 contributing half of global growth to 2025, gaining share from today's megacities. Worldwide, we will see 13 middleweight cities become megacities by 2025, 12 of which are in emerging markets (the exception is Chicago) and seven in China alone.

- Emerging market mega- and middleweight cities together—423 of them are included in the City 600—are expected to contribute more than 45 percent of global growth from 2007 to 2025. Across the world, we see 407 emerging market middleweights contributing nearly 40 percent of global growth, more than the developed world and developing region megacities put together (Exhibit E2).

Exhibit E2

Middleweight cities in emerging markets are poised to deliver nearly 40 percent of global growth by 2025, more than the entire developed world and emerging market megacities combined[1]

Contribution to GDP and GDP growth by type of city
%



1 Megacities are defined as metropolitan areas with ten million or more inhabitants. Middleweights are cities with populations of between 150,000 and ten million inhabitants.
2 Real exchange rate (RER) for 2007 is the market exchange rate. RER for 2025 was predicted from differences in the per capita GDP growth rates of countries relative to the United States.

SOURCE: McKinsey Global Institute Cityscope 1.0

- By 2025, developing region cities of the City 600 will be home to an estimated 235 million households earning more than $20,000 a year at purchasing power parity (PPP). This compares with more than 210 million such households expected in the cities of developed regions. So, even at the higher end of the middle-income segment, there will be more households in emerging market cities than in developed ones.

- Population in the City 600 will grow an estimated 1.6 times as fast as the population of the world as a whole. By 2025, we estimate that the 600 will be home to more than 25 percent of the world's working-age population, 15 percent of its children (aged below 15), and 35 percent of its older population (aged 65 and above).

- However, expanding populations are not the largest drivers of urban growth. In most cities, rising per capita GDP is the major factor, fueled by agglomeration benefits in larger cities and their capacity to attract higher investments and talented workers.

- The City 600 will be home to an estimated 310 million more people in the working-age population by 2025—accounting for almost 35 percent of the expansion of the potential global workforce. Almost all of this increase is likely to be in emerging market cities and two-thirds in the leading cities of the China region and South Asia.[6]

- By 2025, there are likely to be about 13 million more children in these 600 cities than there were in 2007 but with very different trends across regions. An estimated seven million additional children will be in the City 600's Chinese cities compared with 2007, despite the fact that the number of children in China overall is declining. We anticipate that cities in the United States and Canada will have three million more children in urban centers in 2025 than in 2007, but that there will be ten million fewer children in Latin America's large cities.

- By combining demographic and income distribution data, we estimate that the number of children in households with an annual household income above $20,000 is likely to grow more than ten times as fast in the cities of developing regions as those in developed economies. Within the City 600, just over 95 percent of the growth in the number of children within this income group is likely to come from cities in developing regions. By 2025, developing cities are likely to account for nearly 60 percent of children in this income group; cities in the China region, Latin America, and South Asia are likely to represent two-thirds of this share.

- Aging cities are not just a developed country phenomenon. We project that the 423 cities from developing regions will contribute almost 80 percent of growth in the 65-plus age group in the City 600 over the next 15 years. The top 216 cities in China will have 80 million new older citizens. Shanghai is expected to be home to twice as many older people as New York.

6 China region includes cities in China (including Hong Kong and Macau) and Taiwan. South Asia includes cities in Afghanistan, Bangladesh, India, Pakistan, and Sri Lanka.

- Around the world, the size of households is declining, leading to more rapid growth in the number of households. We expect the number of households in the world's leading cities to grow at 2.3 times the rate of global population growth. The City 600 alone is likely to account for 250 million new households. An estimated 85 percent of these households will form in the cities of emerging regions; half of the total will be in China's cities alone. Globally, the three cities that will experience the strongest growth in housing demand will be Beijing, Shanghai, and Tokyo.

- The economic role of large cities varies widely among regions today—as do their future growth patterns. China's rapid growth is fueled by the continued growth of its megacities and the emergence of new ones. India's urbanization is at a relatively early stage, while Latin America's largest cities are giving way to fast-expanding middleweights. It is clear that there is no "one size fits all" approach to tapping into the urban markets of emerging economies.

- Choosing the right urban markets requires combining granular market intelligence with company-specific information on the potential of different urban geographies and the cost of reaching them. A strategy based on clusters of cities is an attractive option for many companies, particularly in large countries such as China and India that have significant regional differences in their market characteristics.

□ □ □

For companies seeking pockets of growth in the world economy and policy makers grappling with the multiple challenges of managing fast-expanding cities, scratching the surface is no longer sufficient. In this report, we draw insights from more than 2,000 leading cities in the world, looking at demographic trends and shifts in the profile of households and incomes. The aim of this deep analysis is to help policy makers to prepare themselves more effectively for the challenges ahead, and companies to identify potential "hot spots" to a sufficient level of detail to calibrate effective, targeted strategy. Our research suggests that we need to shift focus from economies as a whole to cities within them, and beyond high-profile megacities to the most attractive middleweights, particularly in emerging markets.

Urban world: Mapping the economic power of cities

Country-level strategies no longer have sufficient focus for many companies looking for growth. India and China are continental-scale economies that are growing rapidly, but looking at them in their entirety is not targeted enough to unearth their market potential and to design tangible approaches to capturing that potential. And there are interesting growth opportunities in emerging economies beyond the BRIC nations (Brazil, Russia, India, and China): For most companies Johore Bharu in Malaysia is a more important market than Jaipur in India or Jingzhou in China.[7] And it's not just business that needs an intimate knowledge of which cities will be the new dynamos of the world economy. Local government leaders need detailed intelligence of individual cities to improve their odds of successfully managing them, while foreign services need to align their diplomatic efforts to support trade with the realities of the 21st century urban world rather than that of the previous century.

To shed light on the microeconomic dynamics of the global economy and inform business decision making, policy, and diplomacy, MGI has developed forecasts for demographic and economic data for more than 2,000 of the largest metropolitan areas around the globe. The resulting MGI Cityscope database enables executives and policy makers to identify leading cities based not only on their population but also on a broader set of criteria (see Box 1, "MGI Cityscope"). The database includes, and analyzes, a large set of midsize cities—the middleweights—that are increasingly important to the world economy and to companies as growth markets.

The MGI Cityscope allows us to analyze the evolution of the world's cities and their weight in the global economy at a granular level of detail (Exhibit 2). Among the many possible rankings available from the MGI Cityscope, the focus of this report is the City 600 group, which comprises the top 600 cities ranked by their contribution to global growth over the next 15 years. Together, these cities contribute just over 60 percent to global growth. The importance of the City 600 is demonstrated by the fact that we estimate the next 400 cities ranked by their contribution to global growth add only about 6 percent on top of the contribution of the City 600 (Exhibit 3). Collectively, the cities of the MGI Cityscope, totaling around 2,000, are projected to contribute 75 percent of global growth to 2025.

7 Many observers talk about the 21st century being the century of cities. Institutions such as the Organisation for Economic Co-operation and Development (OECD), the United Nations, and the World Bank have all stepped up their analysis and data coverage of cities. Cities have attracted interest from professional services firms, too. For instance, A. T. Kearney teamed up with *Foreign Policy* and the Chicago Council on Global Affairs to create the Global Cities Index, Boston Consulting Group demonstrated the importance of emerging market cities to global growth, and The Greater Paris Investment Agency and KPMG published the Global Cities Investment Monitor.

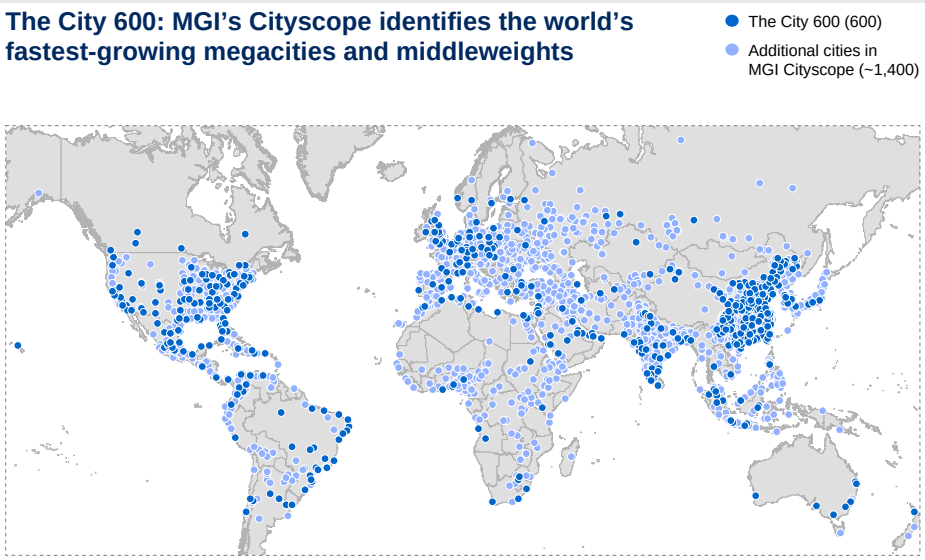
Box 1. MGI Cityscope

The MGI Cityscope is a database of more than 2,000 cities around the world that allows us to understand the evolving shape of global urban economies; extract many different city rankings and groupings by region, variable, and target market; and test the growth momentum that comes from doing business in particular geographies. The database is, to our knowledge, the largest of its kind (Exhibit 1). It can help answer a range of questions relevant for the decisions that companies and policy makers need to make: Which cities will contribute the largest number of children to the world? Where will most of the new entrants to the workforce and most senior citizens be, and which cities will experience the fastest expansion among consuming middle-class income groups?

For each city, the database includes data for 2007 and 2025 on population by age group (children below the age of 15), working-age population (aged 15 to 64), and the older population (aged 65 and above), GDP and per capita GDP (at market and purchasing power parity, or PPP, exchange rates as well as at predicted real exchange rate, or RER), and number of households by income segment (in four income categories defined by annual household income in PPP terms: struggling [less than $7,500]; aspiring [$7,500 to $20,000]; consuming [$20,000 to $70,000]; and global [more than $70,000]). MGI has developed city-specific data from existing public survey data, MGI's city-level datasets developed as part of our previous research, selected data from external data providers, and MGI's country- and region-specific models of city growth to 2025 (see the appendix for more detail on the data sources and methodology for each variable). Over the next two to three years, MGI plans to expand the database to include a broader set of variables, such as infrastructure investment opportunities, consumer demand and savings, and sector-level growth, as well as greater scenario capabilities.[8]

Exhibit 1

The City 600: MGI's Cityscope identifies the world's fastest-growing megacities and middleweights

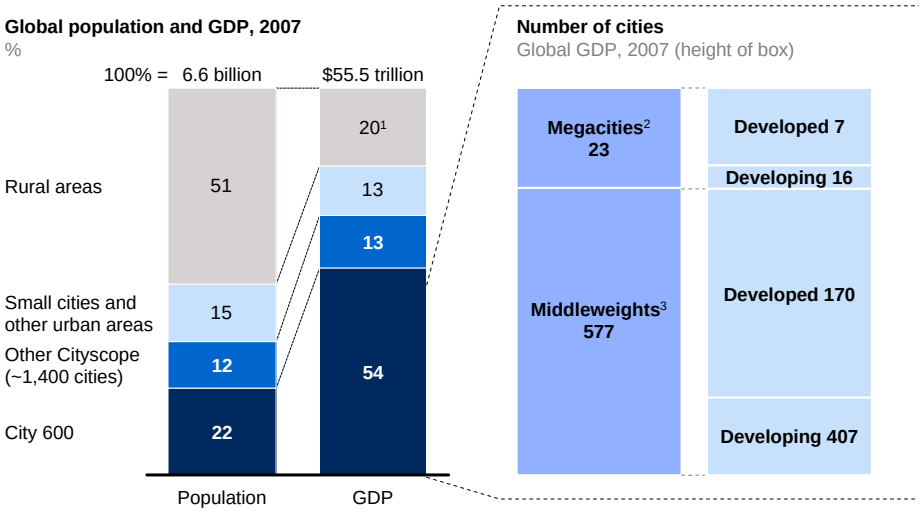


SOURCE: McKinsey Global Institute Cityscope 1.0

8 Projecting the economic and demographic evolution of cities over the next 15 years is inherently subject to multiple sources of uncertainty, and companies need to test the robustness of their business decisions against a broader set of plausible scenarios. See Appendix section 6 for more details.

Exhibit 2

Cityscope can shed light on the evolution of the global economy at a granular level

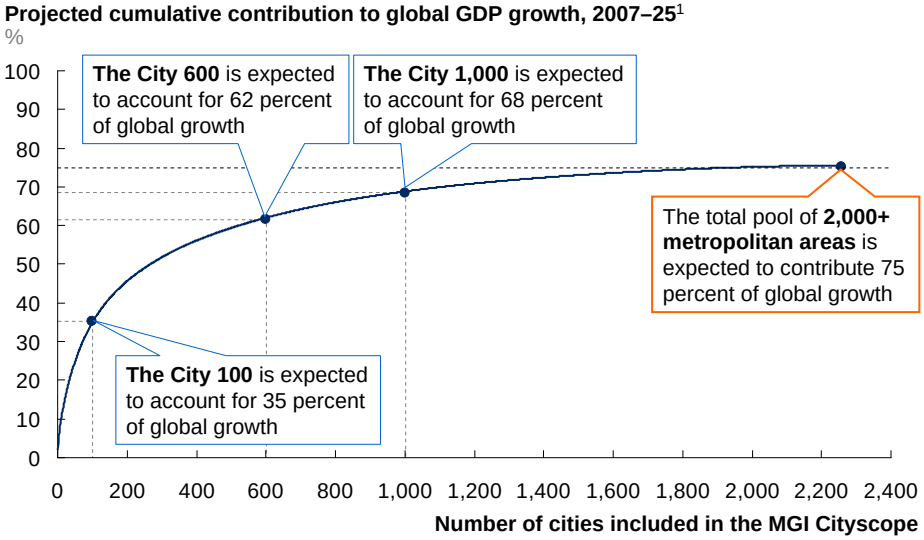


1 Estimate based on global GDP not including agriculture and mining; and GDP contribution of smaller Cityscope cities.
2 Megacities include cities with over 10 million inhabitants in 2007.
3 Middleweight cities have a current population between 150,000 and 10 million.

SOURCE: McKinsey Global Institute Cityscope 1.0

Exhibit 3

The MGI Cityscope comprises the City 600 and ~1,400 additional cities to cover the largest cities by population and GDP today



1 Predicted real exchange rate.

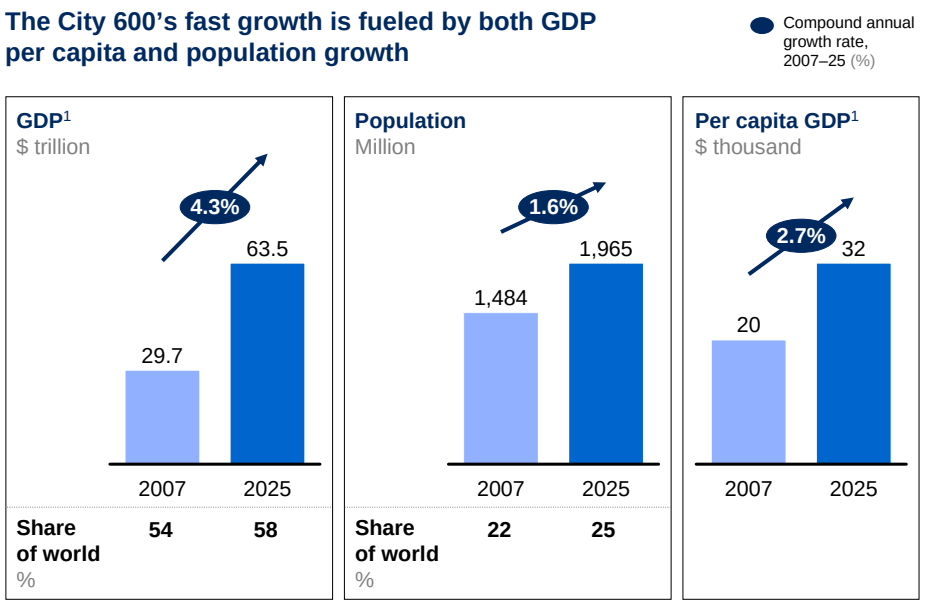
SOURCE: McKinsey Global Institute Cityscope 1.0

The City 600 will drive global growth to 2025

The City 600 metropolises are home to just over 20 percent of the global population today and account for $30 trillion, or more than half, of the world's GDP. From 2007 to 2025, we expect their combined GDP to increase by $34 trillion to more than double today's GDP, contributing more than 60 percent to world GDP growth. They will, in short, drive global growth (Exhibit 4).

Exhibit 4

The City 600's fast growth is fueled by both GDP per capita and population growth



1 Predicted real exchange rate.
SOURCE: McKinsey Global Institute Cityscope 1.0

Faster than average growth in both per capita GDP and population are propelling the rapid expansion of the City 600. These cities will be home to an estimated 480 million new inhabitants, many of them rural migrants in China and in other emerging markets that are experiencing a fast pace of urbanization. We project that average per capita GDP in these cities will rise from $23,000 in 2007 to a projected $38,000 in 2025 (in PPP terms), nearly a twofold increase.

Middleweights will gain ground on megacities

Contrary to popular belief, the world's very largest cities are not driving global growth. Over the next 15 years, half of worldwide GDP growth is likely to come from middleweight cities with a current population of less than ten million.

Without doubt, today's 23 megacities are genuine economic heavyweights.[9] They are home to 5 percent of the world's population and generate 14 percent of global GDP. This reflects the fact that these cities boast, on average, 80 percent higher per capita GDP than their host economies. As urban centers grow, they benefit from

9 The 23 megacities with populations over ten million in 2007 are, from highest population to lowest: Tokyo, Mumbai, Mexico City metropolitan region, New York, São Paulo, Shanghai, Kolkata, Delhi, Beijing, Chongqing, London, Dhaka, Buenos Aires, Los Angeles, Karachi, Cairo, Rio de Janeiro, Paris, Rhein-Ruhr, Osaka, Manila, Moscow, and Istanbul.

agglomeration—or economies of scale—that enable many industries and service sectors to have higher productivity than they do in a rural setting. It is also much less expensive to provide goods and services in concentrated population centers. Our research indicates that the cost of delivering basic services such as water, housing, and education is 30 to 50 percent cheaper in concentrated population centers than it is in sparsely populated areas.[10] Very large cities attract the most talent and inward investment, and they are often at the center of a cluster of smaller cities, which creates network effects that spur economic growth and productivity. At the center of China's burgeoning and economically dynamic Yangtze River Delta cluster, Shanghai is just one example (see Box 2, "The advantages of scale in China—the case of Shanghai").

Box 2. The advantages of scale in China—the case of Shanghai

Of the 858 cities (official and unofficial) in China, only 13 today have populations above five million. Yet these cities accounted for more than 25 percent of China's total GDP in 2007. Why are China's larger cities more successful than its smaller cities? Without doubt, history, location, economies of scale, and broad preferences granted by the central government (for example, Special Economic Zone status) have contributed. But MGI has identified three critical factors that explain why larger cities such as Shanghai, in general, have more advantageous conditions for economic success.

1. **Larger cities attract the most talent.** Shanghai has the skills and talent it needs to feed growth. The city has access to 100,000 or more graduates from 60 higher education institutions every year. As a result, more than one-quarter (28 percent) of Shanghai's labor force has a college education—double the proportion of a decade ago. The city is also beginning to attract talent from overseas—the expatriate community is half a million strong.

2. **Large cities attract more investment.** Foreign direct investment (FDI) has disproportionately landed in larger cities. FDI in emerging markets, at least initially, tends to go to areas that have market access as well as better infrastructure, services, and tax and other financial incentives. Larger cities in China, including Shanghai, have been more competitive than smaller ones in the provision of these benefits and others that are favorable to businesses. The establishment of a foreign-invested community reduces perceived investment risks and creates a virtuous cycle that serves to attract more investment in the future. Large cities also tend to attract a disproportionate share of total financing for infrastructure, driven by larger local equity pools, greater perceived creditworthiness, and access to a larger range of financing sources due to scale (e.g., large cities can tap the bond market).

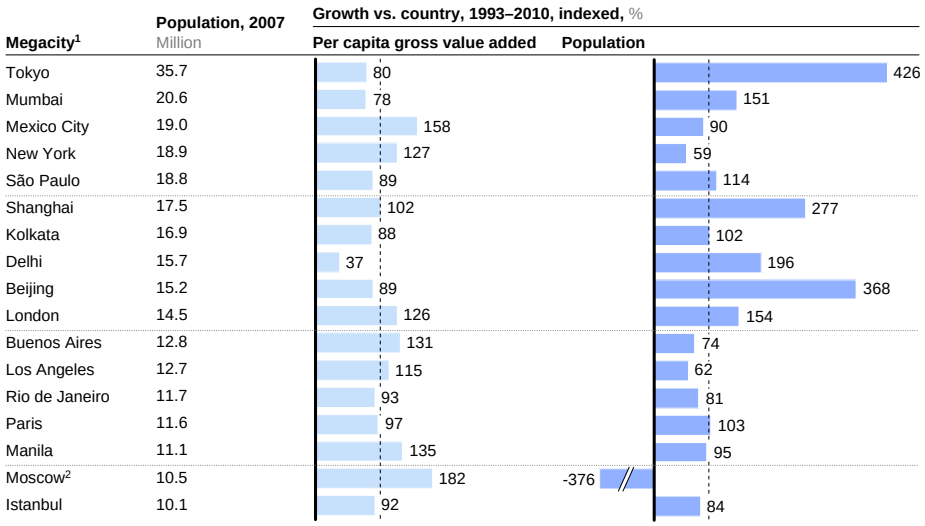
3. **City network effects stimulate economic growth.** Large cities are almost always at the center of a cluster of smaller cities, and network effects spur economic growth and productivity. Shanghai sits in the middle of a very close-knit cluster of economic centers on the Yangtze River Delta, and this proximity has driven growth in the entire region.

10 MGI estimates, for instance, that the cost of delivering a liter of piped water in urban areas is around 50 percent cheaper because cities are able to leverage common supply depots and cut distribution costs. The same advantage holds true for higher-end infrastructure. Some elements of the infrastructure that are critical to high-end services—international airports, for example—are economically feasible only in population centers of a certain minimum size. It takes $4.8 million in capital expenditure per daily flight in a city whose population exceeds four million versus nearly $13 million in a city of less than one million. See *India's urban awakening: Building inclusive cities, sustaining economic growth*, McKinsey Global Institute, April 2010 (www.mckinsey.com/mgi).

Yet many of the globe's megacities are no longer outgrowing their host national economies. Many megacities have started to exhaust their economies of scale and are today experiencing slower growth in their population and per capita GDP—a trend we expect to continue (Exhibit 5). As a result, today's megacities are projected to contribute just over 10 percent to global GDP growth, and their share of global GDP is expected to slip from 14 percent in 2007 to 13 percent in 2025.

Exhibit 5

Contrary to popular belief, many megacities have not grown faster than their host economies in the recent past


Megacity[1]
Population, 2007
Million
Growth vs. country, 1993–2010, indexed, %
Per capita gross value added
Population
Tokyo 35.7 80 426
Mumbai 20.6 78 151
Mexico City 19.0 158 90
New York 18.9 127 59
São Paulo 18.8 89 114
Shanghai 17.5 102 277
Kolkata 16.9 88 102
Delhi 15.7 37 196
Beijing 15.2 89 368
London 14.5 126 154
Buenos Aires 12.8 131 74
Los Angeles 12.7 115 62
Rio de Janeiro 11.7 93 81
Paris 11.6 97 103
Manila 11.1 135 95
Moscow[2] 10.5 182 -376
Istanbul 10.1 92 84

1 Analysis for megacities where data were available (17 out of 23).
2 Population compound annual growth rate 1993–2010 was 1.1 percent in Moscow and -0.3 percent in Russia.
SOURCE: Brookings Institution Global Metro Monitor; McKinsey Global Institute Cityscope 1.0

However, our evidence does not suggest that there are fixed limits beyond which cities cannot grow—and grow productively. The only hurdle to the growth of urban centers is an inability to keep pace with, and manage, their expansion. Large urban centers are highly complex and demanding environments that require a long planning horizon and extraordinary managerial skills. Yet many city governments are not prepared to cope with the speed at which their populations are growing. Without skillful planning and management, cities run the risk of diseconomies—such as congestion and pollution—starting to outweigh scale benefits, leading to a deteriorating quality of life and a loss of economic dynamism.

The decline in importance of megacities is neither inevitable nor irreversible. Cities can move decisively to tackle infrastructure gaps, improve planning, foster high-productivity jobs, and overcome these diseconomies (see Box 3, "Using MGI's Urban Performance Index to gauge Latin America's city challenge").

Box 3. Using MGI's Urban Performance Index to gauge Latin America's city challenge

Latin America's growth path depends greatly on how the region manages its cities. Among developing regions, Latin America has one of the highest shares of its population living in large cities. Economic activity is more concentrated in the region's large cities, too. The top ten cities accounted for nearly 35 percent of the region's GDP in 2007 compared with the 30 and 25 percent generated by the top ten cities in the United States and Canada, and in Western Europe, respectively.[11]

While in the past Latin America's large cities have captured the scale benefits of their size, today they have run up against diseconomies of scale. As urban centers have expanded, they have "swallowed up" smaller neighboring towns outside the large city's jurisdiction. Fragmented political boundaries have often spread urban management responsibilities to mayors in multiple municipalities, state governments, and federal institutions responsible for housing or economic development, for instance. Planning and policy have too often been uncoordinated and typically don't look far enough ahead. This has led to congestion, pollution, damagingly high levels of informal economic activity, and a failure to generate sufficient high-productivity jobs needed for an expanding labor force. Reflecting the multiple stresses faced by Latin America's largest cities, the rate of their population growth is already slowing down. Inward migration has eased off, and some people are moving to the midsize cities. We see per capita GDP in the top ten cities continuing to be almost 1.5 times the region's average, but the region's faster-growing midsize cities are likely to narrow most of the gap with their largest cousins by 2025.

Latin America needs to identify what is preventing its largest cities from fulfilling their potential and act to put these aspects right. MGI has assessed the performance of eight major Latin American cities—the Mexico City metropolitan region, São Paulo, Buenos Aires, Rio de Janeiro, Lima, Bogotá, Santiago, and Monterrey—using 100 quantitative indicators along four dimensions that matter most for ensuring citizens' well-being: economic growth, quality of life, environmental sustainability, and finance and governance. The Urban Performance Index (UPI), a benchmarking tool that MGI has designed to compare the relative performance of cities, analyzes in detail where each city stands on each dimension.

The region faces challenges on productivity and research and development; yet there are many instances of best practice that cities across the region can adopt. Bogotá's single national health-care system delivers 90 percent coverage. In Mexico, the technology cluster around the Monterrey Institute of Technology and Higher Education has boosted the city's per capita GDP and Monterrey also has the lowest share of population living below the poverty line (4 percent) in the region. Middleweight cities such as Panama City, Viña del Mar in Chile, Curitiba and Florianópolis in Brazil, Toluca and Merida in Mexico, and Cartagena in Colombia are all innovating on policy and are expected to see rapid GDP and productivity growth between now and 2025.[12]

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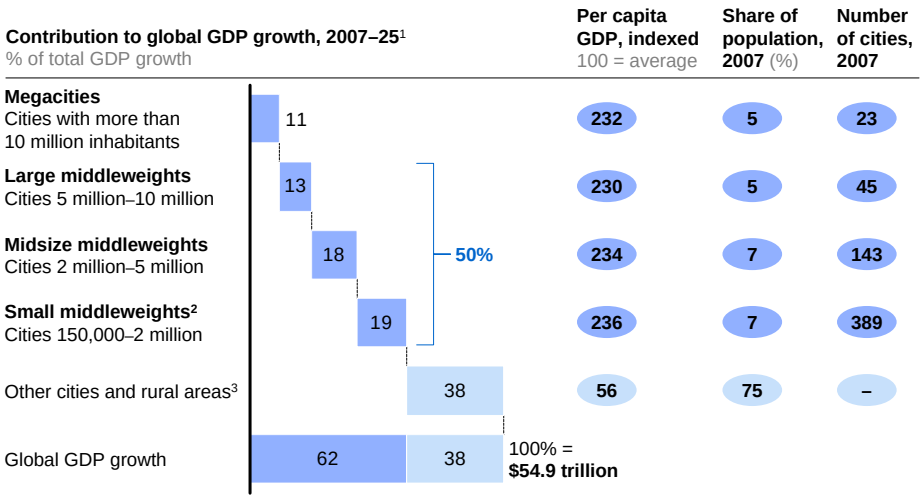
11 *Building globally competitive cities: The key to Latin American growth*, McKinsey Global Institute, forthcoming in 2011.

12 The Urban China Initiative, a think tank founded by McKinsey, Columbia University, and Tsinghua University's School of Public Policy Management in 2010, recently published an Urban Sustainability Index (USI), the first index for measuring and comparing urban sustainability across China. Most previous analyses have focused on comparing economic growth and environmental sustainability and have remained rather theoretical. The USI broke new ground by using indicators that are available in and relevant to developing economies, including China. For detail, please see Jonathan Woetzel, Geng Xiao, and Lan Xue, *The Urban Sustainability Index: A new tool for measuring China's cities*, Urban China Initiative, November 2010.

In contrast, we expect middleweights to expand rapidly between 2007 and 2025, fueled by above-average growth in both their population and per capita GDP. Taken together, we see the 577 middleweight cities in the City 600 contributing 50 percent of global GDP growth to 2025. We anticipate that the small and midsized among them—with populations of 150,000 to five million—will contribute by far the most to that growth (Exhibit 6).

Exhibit 6

The City 600 will contribute 60 percent of global growth to 2025, and middleweights will account for 50 percent of growth



1 Predicted real exchange rate.
2 Smallest city in terms of 2007 population has 208,000 inhabitants (Asan, South Korea).
3 Cities that do not belong to the City 600; small cities and towns and rural areas.
NOTE: Numbers may not sum due to rounding.
SOURCE: McKinsey Global Institute Cityscope 1.0

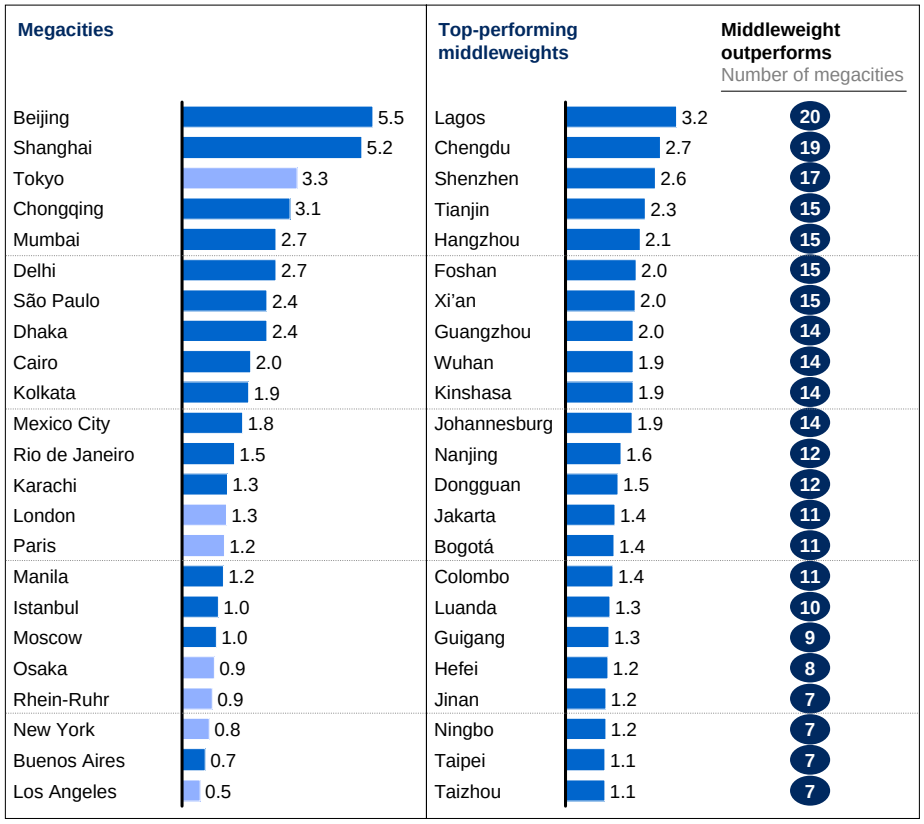
The world's middleweights are growing so fast that 13 cities are likely to cross the ten million population threshold and become megacities by 2025. We see all but one new megacity—Chicago—being in developing countries. The 12 new developing country megacities will be Chengdu, Dongguan, Guangzhou, Hangzhou, Shenzhen, Tianjin, and Wuhan in China; Kinshasa in the Democratic Republic of the Congo; Lagos in Nigeria; Jakarta in Indonesia; Lahore in Pakistan; and Chennai in India.

Companies that reach beyond well-known megacities and identify the middleweights most likely to drive their top-line growth should have much higher odds of getting their urban strategy right and outperforming their peers. This is true across three dimensions of the city landscape that matter for their attractiveness—demographics, households, and incomes. On all three, many middleweight cities are poised to outperform most megacities even in their absolute level of growth. In Exhibits 7 and 8, we show examples of growth in households and incomes in middleweight cities and compare them with the performance of today's 23 megacities.

Exhibit 7

The top-performing middleweights outperform most megacities in terms of household growth . . .

Top cities in terms of absolute household growth
Million households



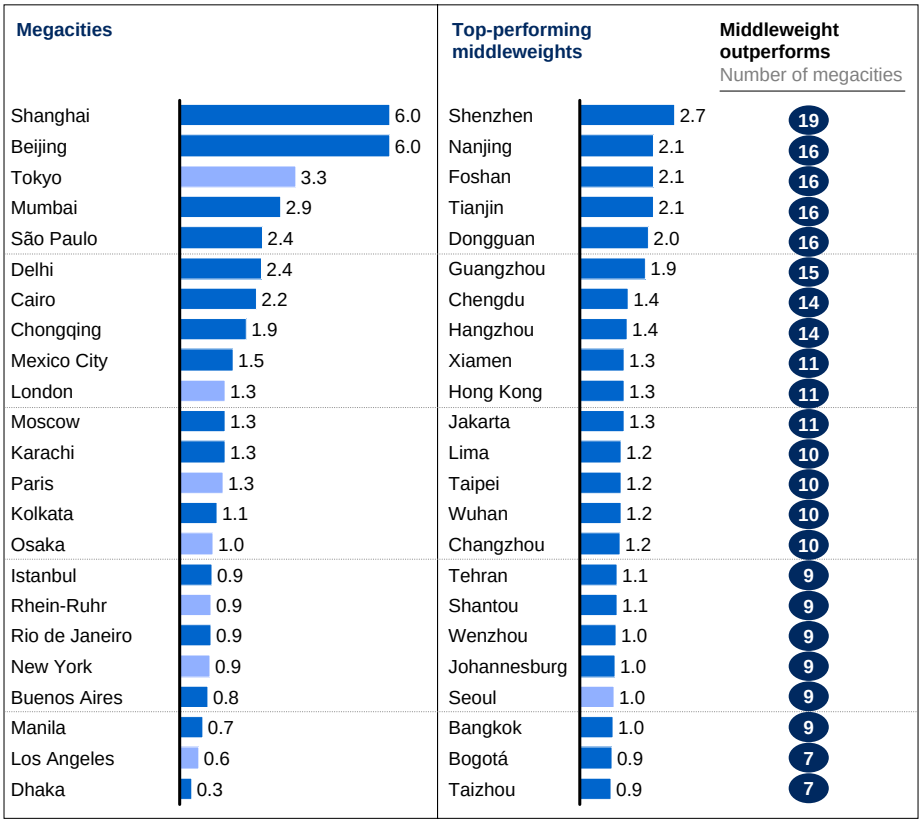
SOURCE: McKinsey Global Institute Cityscope 1.0

Exhibit 8

. . . as well as growth in attractive income segments

Developed regions
Developing regions

Top cities by increase in the number of households with annual income above $20,000 at PPP
Million households



SOURCE: McKinsey Global Institute Cityscope 1.0

Almost three-quarters of the City 600 are in emerging economies

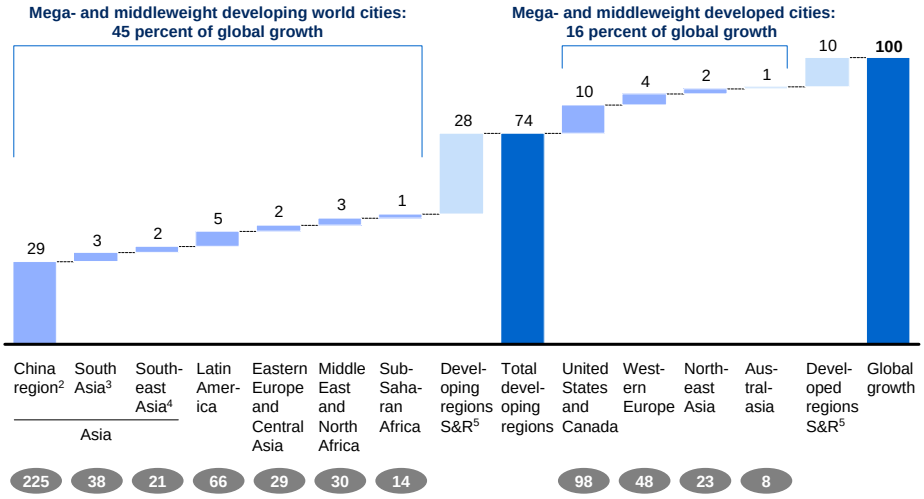
As the center of gravity of the world economy shifts from developed to emerging economies, so too will the importance of cities in those emerging economies. From 2007 to 2025, 423 emerging market cities—more than 70 percent of the City 600—will generate more than 45 percent of global GDP growth, according to our estimates. Today, these cities account for only about 15 percent of global GDP. The China region's 225 cities alone will contribute an estimated 30 percent to the world's projected increase in GDP (Exhibit 9).

Exhibit 9

In developing regions, around 420 cities will generate 45 percent of global growth; Chinese cities will contribute almost 30 percent of the total

GDP growth[1] by geography

100% = $54.9 trillion



1 Predicted real exchange rate.
2 Includes cities in China (including Hong Kong and Macau) and Taiwan.
3 Includes cities in Afghanistan, Bangladesh, India, Pakistan, and Sri Lanka.
4 Includes cities in Cambodia, Indonesia, Laos, Malaysia, Myanmar, Papua New Guinea, Philippines, Singapore, Thailand, and Vietnam.
5 S&R = small cities and rural areas.
NOTE: Numbers may not sum due to rounding.
SOURCE: McKinsey Global Institute Cityscope 1.0

The rapid growth of cities in the emerging regions reflects both above-average population and per capita GDP growth. The population of the 423 emerging region cities in the City 600 will grow by an estimated 430 million by 2025—an increase of just over 40 percent—to 1.5 billion in total. At the same time, we project that the average income (measured in per capita GDP at PPP) in these urban centers will increase more than twofold from $13,000 to $31,000. As a result, these cities will account for nearly 20 percent of the global population and about 30 percent of global GDP by 2025.

Among developed economies, we expect North America's largest cities to contribute 10 percent of global GDP growth—more than the contribution of all of the cities in other developed regions put together.

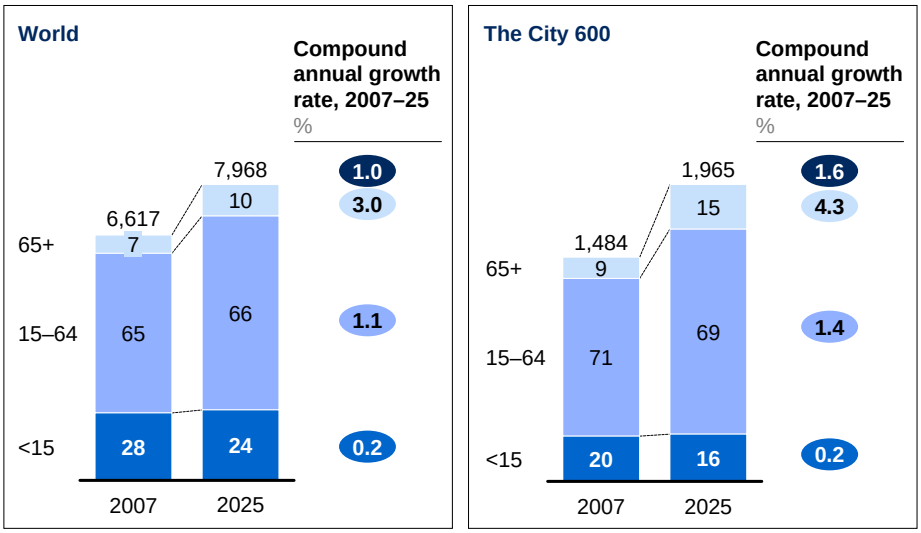
The City 600 population will expand 1.6 times as fast as the global population

Both faster population growth and inward migration help explain why the City 600 group is growing so rapidly. Indeed, the combined population of these cities is rising 60 percent more quickly than the global average (Exhibit 10). By 2025, we estimate that the 600 will be home to more than 25 percent of the world's working-age population (aged 15 to 64), 15 percent of its children (below the age of 15), and 35 percent of its older population (aged 65 and older).

Exhibit 10

The City 600 population will grow 60 percent faster than that of the world

Population by age group
%; million



SOURCE: United Nations; McKinsey Global Institute Cityscope 1.0

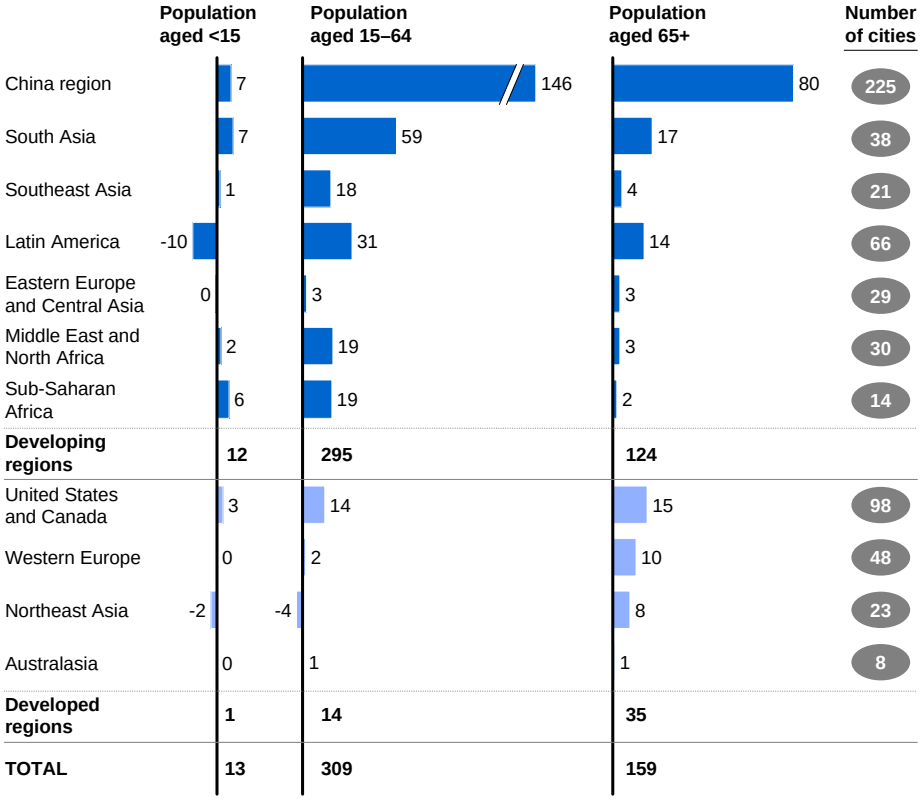
We expect to see a surge of nearly 310 million in the working-age population within the City 600—almost 35 percent of the projected expansion of the entire global labor force. Almost all of this increase is likely to be in emerging market cities and two-thirds in the leading cities of the China region and South Asia (Exhibit 11).

Demographic trends in cities can be quite different from those in their host countries. The number of children in China as a whole is declining, but China's largest cities will be home to an estimated seven million more children by 2025 (Exhibit 12). Meanwhile, Africa and the Middle East together may have eight million more children in urban centers by 2025, and South Asia will have about seven million more children. In the Americas, we expect the largest cities in the United States and Canada to have three million more children while, in contrast, there are likely to be ten million fewer children in large Latin American cities.

Exhibit 11

The City 600 will add 310 million people of working age by 2025

Population change in the City 600 by age segment and region, 2007–25
Million

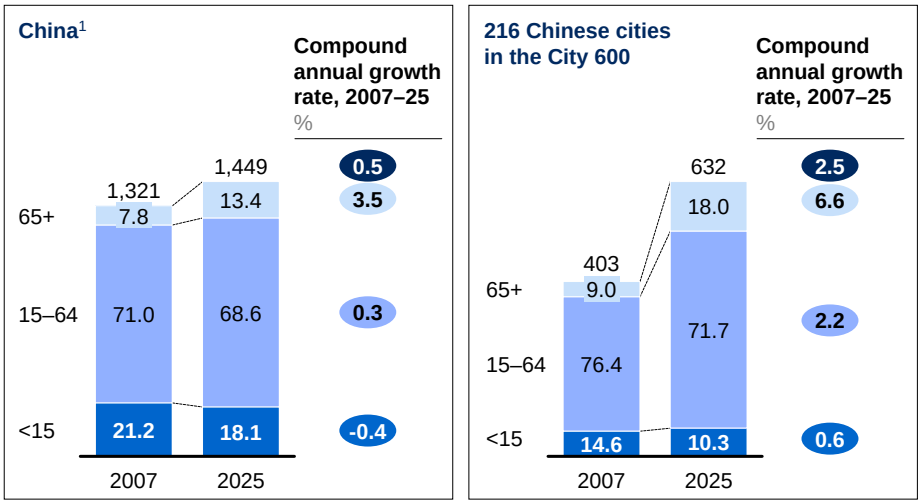

Population aged <15
Population aged 15–64
Population aged 65+
Number of cities
China region 7 146 80 225
South Asia 7 59 17 38
Southeast Asia 1 18 4 21
Latin America -10 31 14 66
Eastern Europe and Central Asia 0 3 3 29
Middle East and North Africa 2 19 3 30
Sub-Saharan Africa 6 19 2 14
Developing regions 12 295 124
United States and Canada 3 14 15 98
Western Europe 0 2 10 48
Northeast Asia -2 -4 8 23
Australasia 0 1 1 8
Developed regions 1 14 35
TOTAL 13 309 159

NOTE: Numbers may not sum due to rounding.
SOURCE: McKinsey Global Institute Cityscope 1.0

Exhibit 12

Despite expected decline in the number of children in China, the largest cities will see their population below 15 years rise by 7 million

Population by age group
%; million



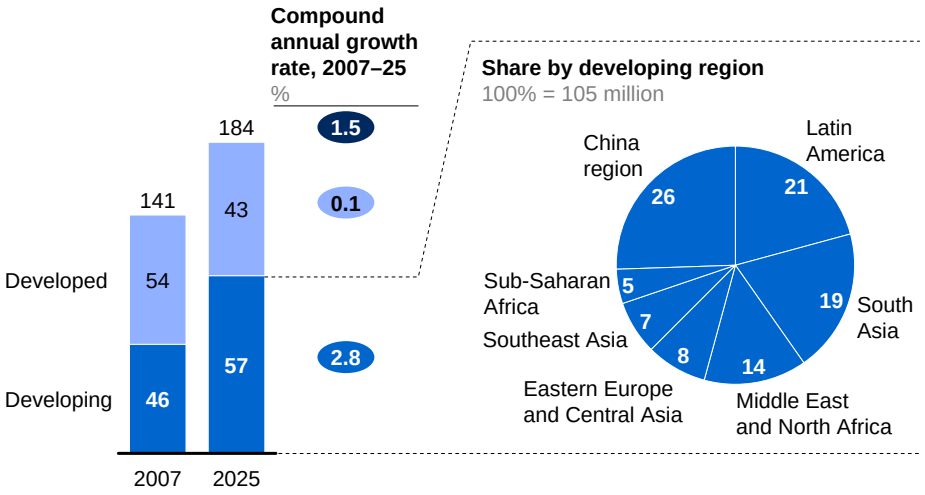
1 The country of China does not include Hong Kong and Macau.
SOURCE: United Nations; McKinsey Global Institute Cityscope 1.0

By combining demographic and income distribution data, we estimate that the number of children in households with an annual household income above $20,000 living in the City 600 is likely to grow more than ten times as fast in developing cities as in developed regions (Exhibit 13). As a result, more than 95 percent of the growth in the number of children within this higher-end middle-income group is likely to come from cities in developing regions. By 2025, developing cities are likely to account for almost 60 percent of the middle-class children; within this group, cities in the China region, Latin America, and South Asia represent two-thirds.

Exhibit 13

The number of children in the higher middle-income segment will grow faster in the developing cities of the City 600

Total population aged <15 in households with annual income above $20,000 at PPP in the City 600[1]
%; million



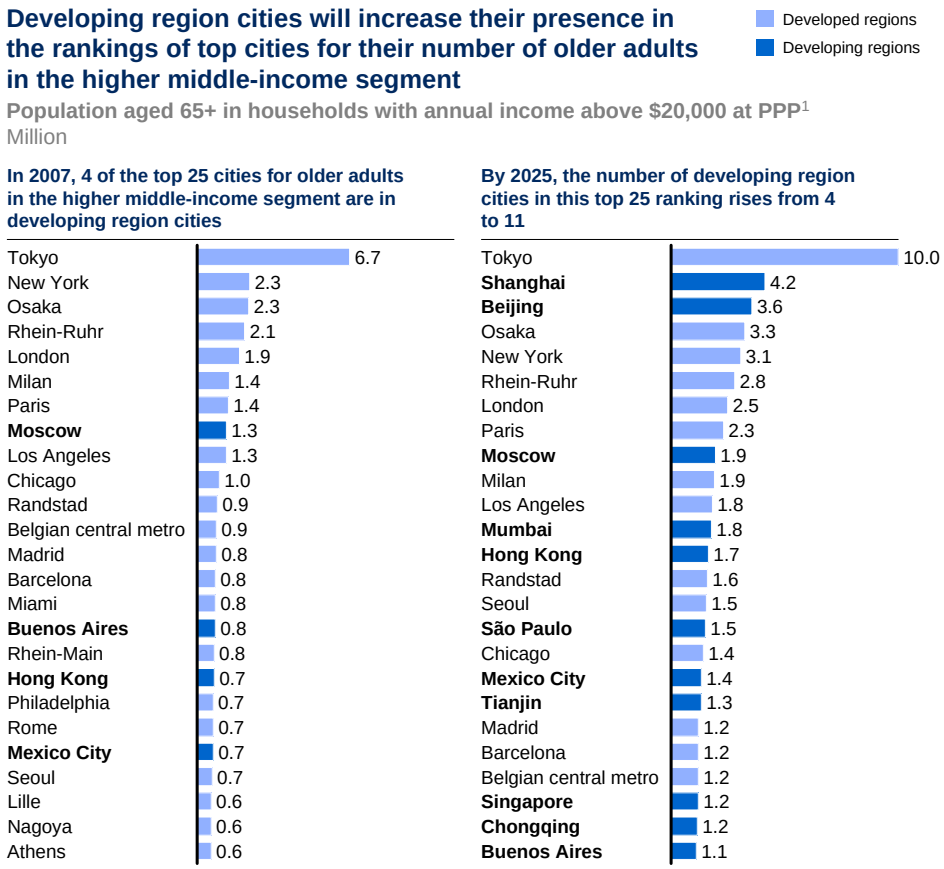
1 Assuming population distribution across income segments is identical to household distribution across segments.
NOTE: Numbers may not sum due to rounding.
SOURCE: McKinsey Global Institute Cityscope 1.0

This growth in emerging economies is reflected in the ranking of urban markets by the number of children in the higher middle-income segment (household income above $20,000 at PPP). In 2007, ten of the top 25 cities by number of children in this attractive income bracket were in emerging market cities; by 2025, we see this number rising to 16. Karachi, Mumbai, and Cairo are all likely to rise into the top ten urban regions by the number of children in the higher middle-income segment.

Turning to the older generation, we project that the 423 cities from developing regions will contribute almost 80 percent of growth in the 65-plus age group in the City 600 over the next 15 years. This increase of 125 million seniors represents 35 percent of the expected global increase in the population in this age group. The top 216 cities in China will have 80 million new older citizens. Shanghai will be home to twice as many older people as New York. We also see the City 600 in Latin America and South Asia together contributing almost 30 million new seniors—10 percent of the global increase in this age group.

Developed regions today are home to more than a quarter of children living in the City 600 but more than 45 percent of senior citizens in these cities. Cities in emerging countries are experiencing a rising share of older residents, including in the higher middle-income segments. Until now, developed cities have dominated the top 25 rankings in terms of playing host to older citizens in households earnings $20,000 or above, but we anticipate that 11 developing cities will make it onto that list by 2025 (Exhibit 14).

Exhibit 14



1 Assuming population distribution across income segments is identical to household distribution across segments.
SOURCE: McKinsey Global Institute Cityscope 1.0

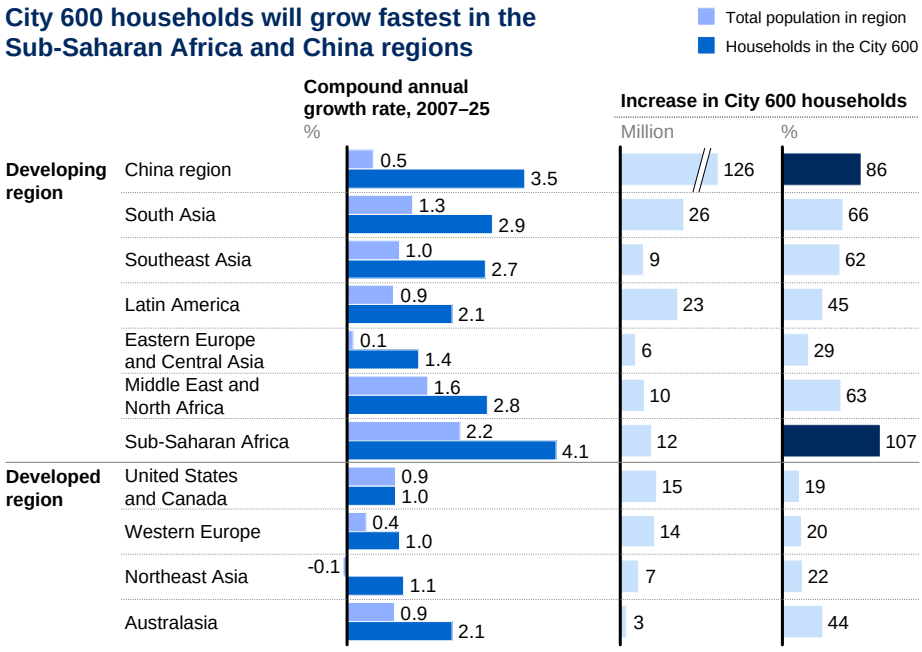
Declining household size expands demand for housing and other household durables

Worldwide, we project that 250 million new households will form in the City 600 from 2007 to 2025, boosting demand for housing, appliances, and other household-driven goods and services. Half of these new households will be in Chinese cities. Small and midsize middleweights in the City 600 will drive this surge, contributing an estimated 155 million new households, or more than 20 percent of global household growth.

MGI finds that the 423 cities in developing regions are likely to be responsible for 85 percent of the growth in households in the City 600, compared with 15 percent coming from around 177 cities in developing regions. By 2025, we project that almost 50 percent of the households in developed regions will be in large cities; in developing regions, this share is likely to be only around 25 percent. We anticipate that the number of households in Sub-Saharan Africa and the China region will approximately double by 2025. In cities across developing regions, we expect to see quite a wide gap between the growth in the regional population and in the number of urban households (Exhibit 15).

Exhibit 15

City 600 households will grow fastest in the Sub-Saharan Africa and China regions



SOURCE: McKinsey Global Institute Cityscope 1.0

A major reason for this surge in the number of urban households is a global trend toward smaller household sizes driven by demographic shifts and altered behavior. The changing shares of children and seniors have an impact on household sizes. In some regions, young adults are moving to urban areas and there will be more, but smaller, families than in the past. In other regions—notably Latin America—people are not moving *en masse* to large cities, but demographic and cultural changes are in play. There are fewer couples of prime fertility age and thus fewer households with children; young adults who used to live with their parents may be living on their own earlier than they used to. Many seniors will tend to live in small households without their adult children, and there will be more seniors in the mix. Globally, we project that

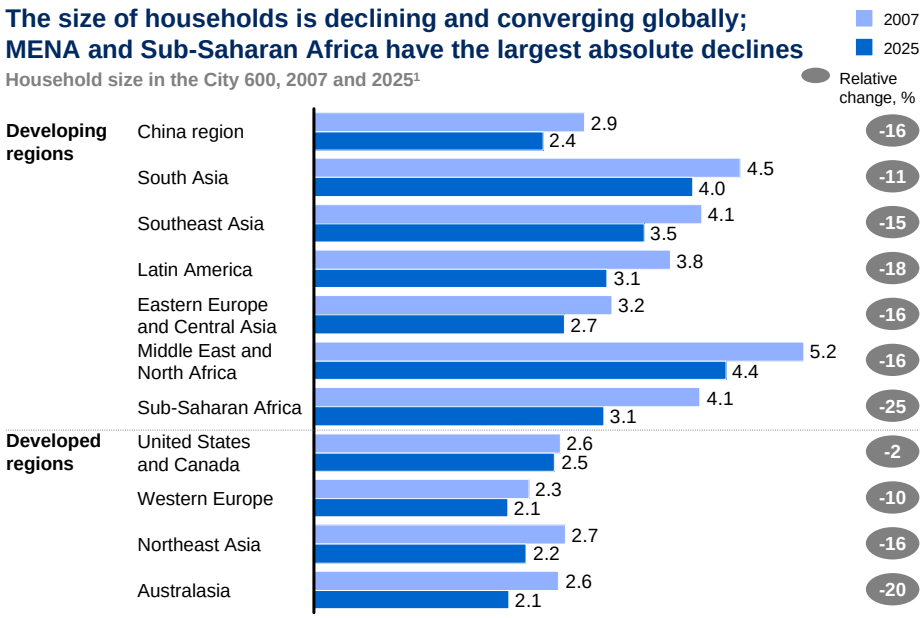
the size of the average household will decline from 4.4 people per household in 2007 to 3.7 by 2025.

Today, the average size of households in the City 600 is already slightly smaller than the global average at 3.2 people and will drop to a projected 2.7 in 2025 (Exhibit 16). The fastest-growing middleweights will experience larger increases in their number of households than most megacities, as we illustrated in Exhibit 7.

Exhibit 16

The size of households is declining and converging globally; MENA and Sub-Saharan Africa have the largest absolute declines

Household size in the City 600, 2007 and 2025[1]



1 Household size calculated by taking the simple average of the household size of all cities within a region.
NOTE: Numbers may not sum due to rounding.
SOURCE: McKinsey Global Institute Cityscope 1.0

In the cities of developing regions, we expect the average size of households to decline from 3.5 people to 2.9. The regions with the largest estimated decline in the size of their urban households are Sub-Saharan Africa (from 4.1 people per household to 3.1) and the Middle East and North Africa (5.2 to 4.4). Among the top developing cities in terms of household growth are likely to be Beijing and Lagos. Together, these two cities will host an estimated nine million new households—six million in Beijing, or more than seven times the number of new households in New York, and three million in Lagos, four times the number in New York.

The rising number of households will fuel demand for not only household goods and services—including cable or broadband penetration—but also housing and infrastructure (see Box 4, "China and India: The infrastructure opportunity"). And that demand is shifting in nature as household incomes rise and the demographic composition of households evolves, translating into changing expectations for housing options. The emerging cities that are likely to face the largest expansion in the volume of housing demand are Beijing, Shanghai, and Lagos; in developed region cities, we anticipate that Tokyo will have the largest increase in the number of households. In Latin America, we expect to see demand for housing in the Colombian capital of Bogotá to increase by 95 percent and in other cities by more than 50 percent—despite much smaller increases in city populations (Exhibit 17).

Box 4. China and India: The infrastructure opportunity

Both India and China will be required to build infrastructure on a grand scale to meet the needs of their surging urban populations.[13]

India lags far behind China in terms of its installed infrastructure capacity because of years of chronic underinvestment. In per capita terms, India's annual capital spending of $17 is only around 15 percent of China's $116. As a share of GDP, India invested about 6 percent on infrastructure from 2002 to 2007, compared with China's 9.3 percent. India needs to step up its construction of urban infrastructure sharply to bridge the gap between demand for services and their provision. MGI estimates that India needs to invest $1.2 trillion (53.1 trillion rupees) in capital expenditure in its cities over the next 20 years, equivalent to $134 per capita per year. That's almost eight times the level of spending today in per capita terms. More than half of the capital investment is necessary to erase India's infrastructure backlog and the rest to fund cities' future needs.

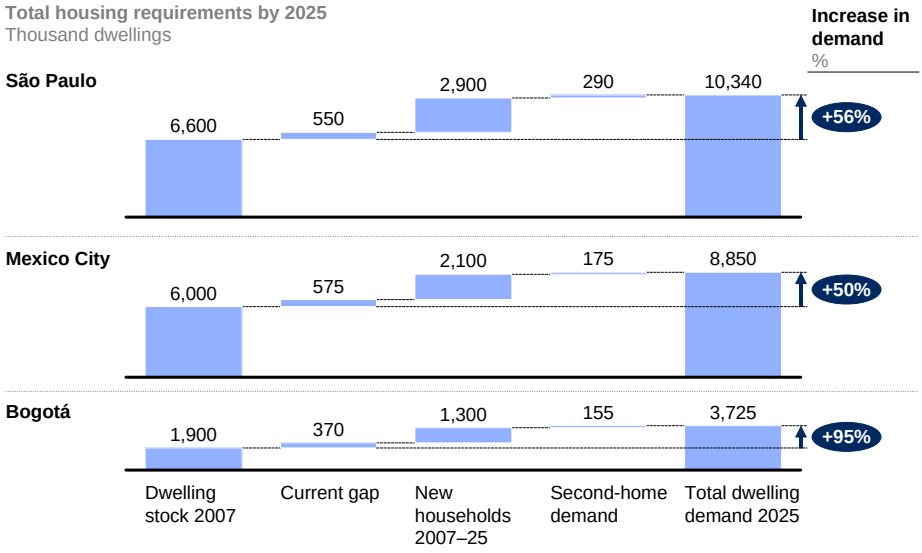
Transportation and affordable housing stand out as the two most capital-intensive sectors. Depending on which urbanization planning scenario each country pursues, India could potentially need to build 700 million to 900 million square meters of new residential and commercial space every year for the next 20 years, and China could require 1.6 billion to 1.9 billion square meters per year. In the case of metro railways and subways, India could potentially have to construct nearly 350 to 400 kilometers of new metro railways and subways per year, while China may need to construct 800 to 1,500 kilometers each year.

Exhibit 17

Demand for new dwellings will increase dramatically in some major world cities

LATIN AMERICA EXAMPLE

Total housing requirements by 2025
Thousand dwellings



NOTE: Numbers may not sum due to rounding.
SOURCE: *Building globally competitive cities: The key to Latin American growth*, McKinsey Global Institute (forthcoming in 2011); McKinsey Global Institute Cityscope 1.0

13 For more detail, see *Preparing for China's urban billion*, March 2009, and *India's urban awakening: Building inclusive cities, sustaining economic growth*, April 2010. Both reports are available at www.mckinsey.com/mgi.

By 2025, emerging market cities will have more higher-end middle-income households than developed ones

The expansion in the number of people or households is a good indicator of likely demand for basic services such as water. But identifying markets for most goods and services requires looking for households with sufficient income to be able to support discretionary spending.

Globally, we estimate that the incomes of nearly one billion households will exceed $20,000 a year in PPP terms by 2025—new armies of higher-end middle classes across the world that present a huge opportunity for companies (see Box 5, "China and India: The consumption opportunity"). Two income brackets earn this much—consuming households with incomes of $20,000 to $70,000 and global households earning $70,000 or more.[14] While households become consumers of some discretionary goods and services at even lower income levels, the $20,000 household income threshold is one commonly used by companies targeting consumer segments with purchasing power beyond necessities.

From 2007 to 2025, we estimate that nearly 140 million households in the City 600 will enter the consuming category globally. Of these, 120 million will be in developing cities—75 million of them in China alone. Therefore, the number of households in developing region cities is larger than the combined tally of consuming households of the United States, Canada, and Western Europe today.

But this is not just a story of rising middle-class cohorts in emerging cities; the number of rich households in these regions will increase, too. The China region, South Asia, and Latin America are together likely to have more than 30 million households with incomes of more than $70,000 a year, close to the number of rich households we expect to see in Western Europe and Northeast Asia together. Among the megacities, Beijing is likely to have one million of these households—as many as Madrid—while among middleweights, Bogotá is likely to match Orlando's 0.4 million households earning above this threshold.

Taking the two together, we see the majority of consuming and global households—55 percent—being in developing regions, an extraordinary shift from the relatively recent past. By 2025, we project that developing region cities in the City 600 will have 235 million households earning $20,000 or more—1.1 times the more than 210 million households in developed regions (Exhibit 18).

14 We define annual income categories as follows (all in terms of dollars at PPP): struggling households' incomes are less than $7,500; aspiring households $7,500 to $20,000; consuming households $20,000 to $70,000; and global households $70,000 or more.

Box 5. China and India: The consumption opportunity

Urban China and India will experience significant increases in per capita urban incomes, offering vibrant new consumer markets for businesses to serve. On the back of robust increases in per capita GDP, aggregate urban consumption in India has the potential to increase nearly sixfold from 2005 to 2025—outstripped only by China, whose consumption could rise more than sevenfold.[15]

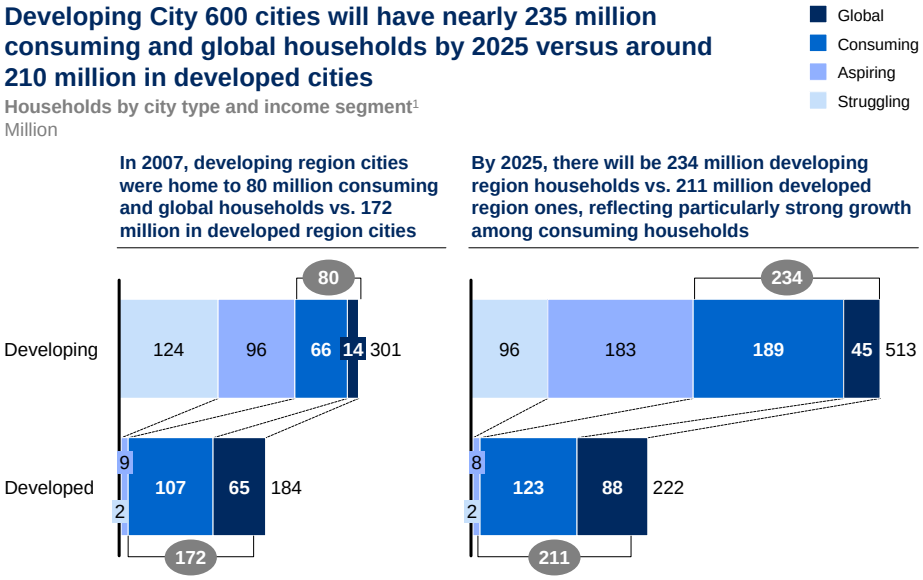
Today, private consumption plays a larger role in India's economy than it does in China, accounting for 60 percent of GDP in 2005, a level similar to the United States and Japan. By 2025, MGI projects that nearly 70 percent of consumption in India will be discretionary spending. In comparison, China's consumption share of GDP was only 39 percent in 2005. However, courtesy of China's higher per capita income and population, its private consumption will be almost double that of India in dollar terms. In India, the shape of the country's income pyramid has changed dramatically during the past two decades and will evolve even more significantly. MGI finds that the number of urban households that will join the consuming and global segments in India's top 177 cities could potentially increase fivefold, from 5 million households in 2007 to 25 million households in 2025.[16] As a result, consumption driven by "choice" instead of "need" will grow significantly.

MGI projects that the number of higher-end middle-class households in the 600 Chinese cities included in Cityscope could increase nearly tenfold from 15 million households in 2005 to nearly 125 million households in 2025. By 2025, this group could represent nearly 35 percent of China's urban households.

Exhibit 18

Developing City 600 cities will have nearly 235 million consuming and global households by 2025 versus around 210 million in developed cities

Households by city type and income segment[1]
Million



1 Income categories defined in $ PPP: struggling = <$7,500; aspiring $7,500–$20,000; consuming $20,000–$70,000; global $70,000+.
NOTE: Numbers may not sum due to rounding.
SOURCE: McKinsey Global Institute Cityscope 1.0

15 For more detail, see *Preparing for China's urban billion*, March 2009, and *India's urban awakening: Building inclusive cities, sustaining economic growth*, April 2010. Both reports are available at www.mckinsey.com/mgi.

16 MGI has looked at the evolution of consumer markets across India and China, including in smaller cities and towns, covering country-specific income segments that are detailed beyond globally comparable ones. For more detail, see *Preparing for China's urban billion*, which reports that China will add 225 million households to its urban middle class from 55 million households in 2005 to nearly 280 million in 2025. Also see *India's urban awakening: Building inclusive cities, sustaining economic growth*, which sees around 75 million additional households with "true" discretionary spending power to number 90 million households in 2025.

In City 600 cities, there will also be a surge in lower-middle-class households, a group earning between $7,500 and $20,000 per annum that we call aspiring. More than 85 million households will enter this income bracket in developing countries, of which the China region and South Asia will contribute the vast majority of 75 million. Meanwhile, we expect this income segment to decline in developed countries.

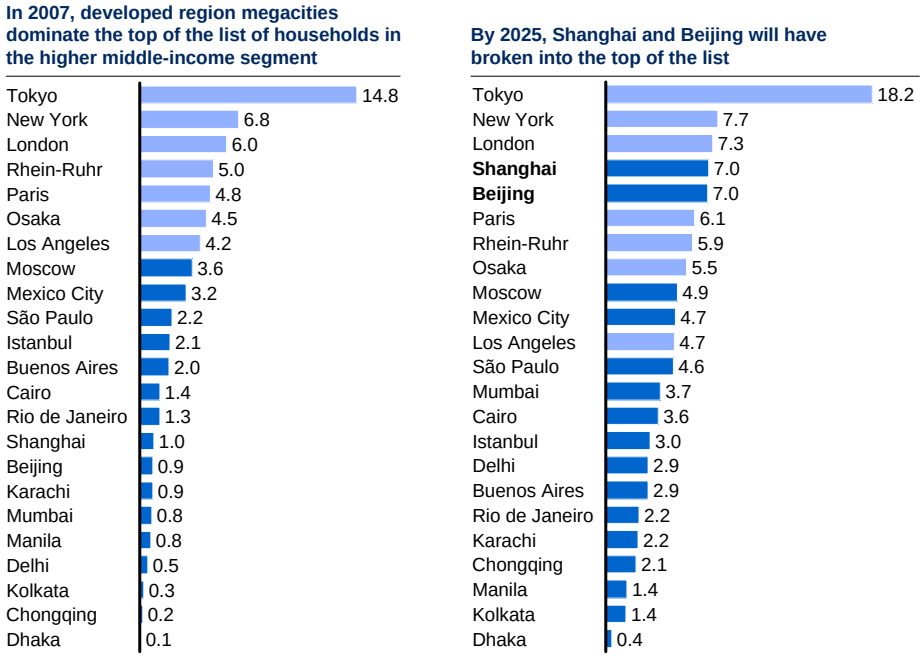
Although emerging cities will be home to a growing number of households in the consuming and global categories, we should note that developed country megacities will remain prominent in the world economy. For instance, our analysis suggests that New York will have almost eight million households in these income brackets and London more than seven million. If we look at incomes in middleweight cities, we find that Jakarta and Lima with roughly two million consuming and global households apiece will be on a par with developed region middleweights. Beijing and Shanghai stand out from the crowd—they are likely to be home to more than five times the number of consuming and global households as today's tally and will match developed cities in this regard by 2025 (Exhibit 19).

Exhibit 19

By 2025, there will be a marked increase in higher middle-income segment households, with developing cities in particular rising up the list

Developed regions
Developing regions

Megacities in terms of number of households with annual income above $20,000 at PPP[1]
Million households



1 Households with annual incomes greater than $20,000 in PPP terms.
SOURCE: McKinsey Global Institute Cityscope 1.0

A profound change is also taking place at the lower end of the income spectrum in the City 600. We see the pace of growth in developing regions helping to reduce the number of struggling households—households with an annual income of less than $7,500 at PPP—by 30 million from 2007 to 2025. This trend shows that we expect growing cities to make some headway in improving the conditions of their worst-off households. In developed economies, we see the number of struggling households remaining flat.

As one would expect, our research shows that the distribution of household income in cities differs from that of their countries as a whole. For example, Beijing already has a much higher concentration of households within the consuming bracket at 16 percent than China as a whole at 4 percent. By 2025, we project that this gap will be even larger, at almost 55 percent compared with just over 20 percent.

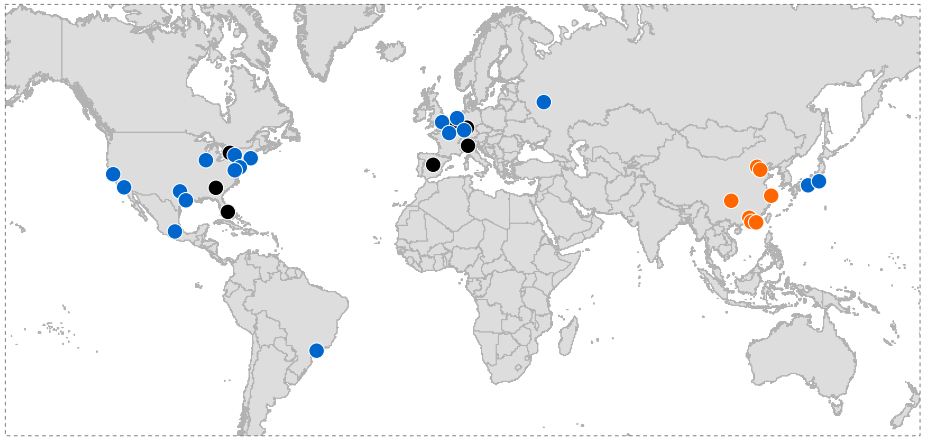
Regions vary in the economic role of the largest cities

Economic power is shifting eastward (Exhibit 20). Today, 22 of the 25 largest cities ranked by GDP are in developed economies, but this situation will change radically in the next 15 years with the rise of Asian cities, particularly those in China. By 2025, nine of the world's top 25 cities ranked by GDP will be located in Asia, up from two in 2007, according to our analysis. During this period, our research suggests that three cities in North America and four in Western Europe will drop off this ranking. In this new landscape of urban economic power, Shanghai and Beijing will outrank Los Angeles and Paris, and Delhi and Bangkok will surpass Detroit and Barcelona.

Exhibit 20

There will be a major shift in urban economic weight from the United States and Western Europe toward Asia

Top 25 cities by GDP, 2007 and 2025[1]



1 Predicted real exchange rate.
SOURCE: McKinsey Global Institute Cityscope 1.0

Beyond this trend of shifting urban economic power toward the east, cities play very different roles in their host economies. The evolution of urban areas tends to have regional characteristics in both developed and developing regions (Exhibit 21).[17]

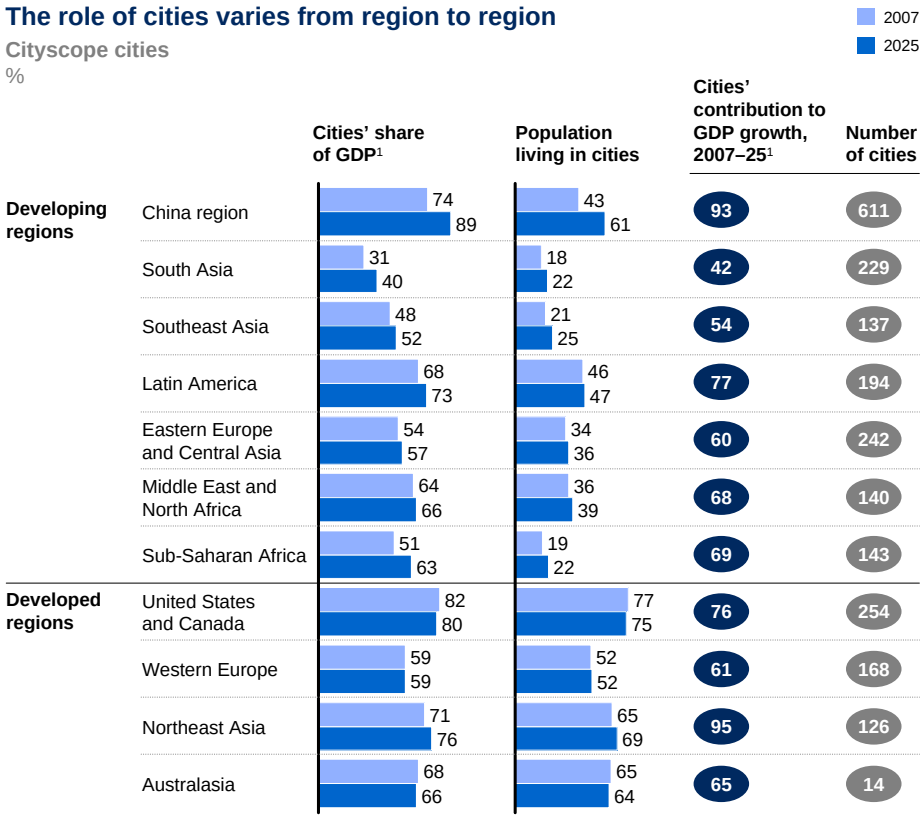
17 To provide a more complete picture of the role of cities in each region, this section refers to the broader pool of roughly 2,000 cities included in the MGI Cityscope, not just the City 600 as in earlier sections. This change in city coverage explains differences in the number of cities and other variables.

In developed regions, the 254 cities in the United States and Canada region that we include in the MGI Cityscope account for more than 20 percent of global GDP today despite being home to less than 5 percent of the global population. Yet their expected growth of 2.3 percent annually will not keep pace with the rapid growth of emerging regions. For this reason, in the period to 2025, we expect North American cities to contribute just over 10 percent of total global growth—which is only half of their share of worldwide GDP today and only one-third of the contribution of Chinese cities to global growth. Clusters of coastal cities in the United States are expected to continue to post growth rates above the regional average. We expect New York and Los Angeles, the two megacities at the center of these North American city clusters, to contribute around $550 billion and $300 billion, respectively, to global GDP growth. Smaller middleweight cities, particularly in the South and the West, are likely to continue to post faster-than-average GDP growth because of their rising populations.

Exhibit 21

The role of cities varies from region to region

Cityscope cities
%


2007
2025
Cities' share of GDP[1]
Population living in cities
Cities' contribution to GDP growth, 2007–25[1]
Number of cities
Developing regions
China region 74 89 43 61 93 611
South Asia 31 40 18 22 42 229
Southeast Asia 48 52 21 25 54 137
Latin America 68 73 46 47 77 194
Eastern Europe and Central Asia 54 57 34 36 60 242
Middle East and North Africa 64 66 36 39 68 140
Sub-Saharan Africa 51 63 19 22 69 143
Developed regions
United States and Canada 82 80 77 75 76 254
Western Europe 59 59 52 52 61 168
Northeast Asia 71 76 65 69 95 126
Australasia 68 66 65 64 65 14

1 Predicted real exchange rate.
SOURCE: McKinsey Global Institute Cityscope 1.0

The urban landscape of Western Europe is quite different from that of North America. The 168 Western European cities in the MGI Cityscope are more broadly spread across the region than are the cities of North America. Western Europe's leading cities have a combined GDP of $10 trillion today, accounting for 18 percent of global GDP. However, this represents only 60 percent of the region's overall GDP (compared with 82 percent in North America), reflecting the fact that smaller cities and rural areas continue to have more economic weight in the region. We anticipate that the largest cities in Western Europe will post annual growth of only 1.3 percent to 2025, contributing around 5 percent of global GDP growth in that period, significantly

below their global GDP share today.[18] London, one of the region's two megacities, is expected to generate $300 billion to GDP growth to 2025—8 percent of the region's overall growth—while we see Paris, the other megacity, generating $200 billion or 5 percent of the region's overall growth.

Turning to developing regions, China and India are in the vanguard of a wave of urban expansion that is helping to return Asia to the global prominence the region enjoyed before the Industrial Revolution. By 2025, we project that more than 1.6 billion Asians will live in the MGI Cityscope cities, accounting for more than 50 percent of the total population living in the largest urban centers globally. We project that the China and South Asia regions alone will account for almost 90 percent of Asia's urban population growth and 60 percent of global urban population growth from 2007 to 2025. MGI expects the China region to add 325 million to the urban population in its largest cities, which would account for an estimated 60 percent of the region's population by 2025, and South Asia to add 150 million to its cities, whose populations will account for just over 20 percent of the regional total in 2025. China and India are at the heart of this transformation. Never before in history have two of the largest nations in terms of population urbanized at the same time.

In India, urban per capita GDP is expected to grow at 9 percent a year from 2007 to 2025, close to China's expected rate of 10 percent annually.[19] The number of urban consuming and global households with true discretionary spending power in India's top 177 cities could increase fivefold to nearly 25 million households in 2025. China already has 15 million consuming and global households, a number that could increase tenfold to over 125 million in 2025 and represent 35 percent of all China's urban households. For businesses, the significant increases in per capita urban incomes and middle-income households offer the potential of vibrant new markets.

But the economic contribution of urban China and South Asia will be quite different in magnitude. The China region (including Hong Kong, Macau, and Taiwan in our analysis) has 611 cities in the MGI Cityscope; most of these are clustered on China's coast or nearby—and it is these cities that will shape the world in the coming years. In 2007, these cities accounted for only 5 percent of global GDP; by 2025, we anticipate that they will generate around 20 percent of worldwide GDP. We project that China will have seven cities in the global top 25 in terms of GDP in 2025, with Shanghai ranking third and Beijing fifth. South Asia has 229 cities in the MGI Cityscope, and we expect Delhi to climb up into the global top 50 in terms of GDP by 2025. Yet given that India and other South Asian countries are at a much earlier stage of urbanization, these 229 cities will be less prominent in the world economy, according to our analysis. Today, the MGI Cityscope cities of South Asia account for only 1 percent of global GDP, and we estimate they will contribute a significant 4 percent of worldwide GDP growth to 2025. Yet this is a fraction of the contribution we expect from urban China.

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18 Our GDP estimates to 2025 rely on predicted real exchange rates, causing the dollar-denominated value added of Western Europe to grow slower than GDP measured in constant domestic currency. This reflects the implicit expectation that the real exchange rate—the combined effect of changes in local prices and market exchange rates—of countries with lower average per capita GDP growth will depreciate relative to countries where incomes are rising faster. See the appendix for more detail on our methodology.

19 In contrast to the Western European example we have cited, the dollar-denominated GDP growth of rapidly growing emerging economies is boosted by expected appreciation in their real exchange rates either through rising domestic prices or changes in the market exchange rate.

Latin America, in turn, has already undergone a wave of urbanization. The 194 cities included in the MGI Cityscope today account for nearly 70 percent of the region's GDP. And the region's urbanization growth has been concentrated in its leading cities—the top ten cities alone generate one-third of the region's GDP. By 2025, we expect the GDP of the region's Cityscope cities to increase to more than $6 trillion, contributing, in the process, 75 percent of the region's growth. We see middleweight cities alone generating nearly 85 percent of this growth. The region's top ten cities will contribute an estimated 25 percent to GDP growth from 2007 to 2025. São Paulo and the Mexico City metropolitan region will each generate approximately $200 billion in GDP growth, just below 10 percent of the regional total. The region's cities are likely to have 25 million new consuming and global households by 2025—nearly equal to the number of households in this income category in the United Kingdom today. The share of global households in Buenos Aires alone will increase from just over 10 percent to more than 15 percent of total households by 2025, our analysis finds.

Sub-Saharan Africa is still in an early stage of urbanization with many of the 143 cities of the MGI Cityscope clustered on the continent's west coast. Today, these cities generate $0.5 trillion in GDP—50 percent of the region's GDP. By 2025, we see their GDP almost tripling to $1.5 trillion, boosting their share of the regional total to more than 60 percent. We see middleweights contributing all of this growth. We expect large middleweights and some small middleweights to outperform the region's largest city of Lagos. However, this region's contribution to world GDP growth will remain at an estimated 2 percent.

The Middle East and North Africa region has 140 cities in the Cityscope. North Africa's cities are all coastal urban centers, while cities are spread more broadly across the Middle East. Today, these 140 cities generate nearly two-thirds of the region's GDP, and, with the region expected to more than double its GDP to 2025, the urban share is likely to remain roughly the same. We see middleweights contributing virtually all of this growth. We anticipate that the cities of Middle East and North Africa will slightly increase their share in the world economy, from generating 2 percent of global GDP today to 3 percent by 2025.

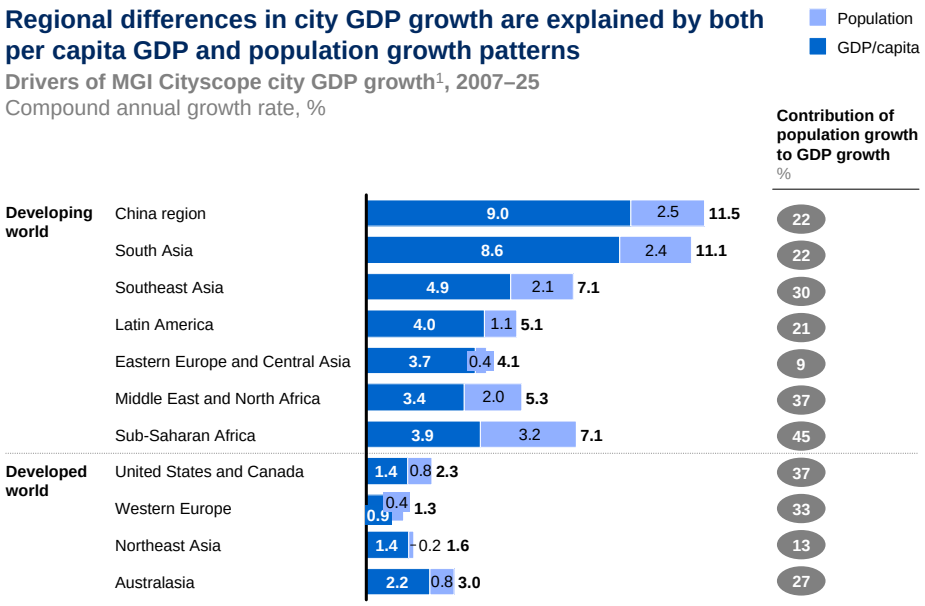
Rapid growth in emerging cities is largely due to rising per capita GDP that, on average, we expect to contribute around 75 percent of GDP growth, with population growth accounting for the rest. Sub-Saharan Africa, where population growth continues to contribute significantly to overall urban GDP growth, is the only exception to this pattern (Exhibit 22).

Exhibit 22

Regional differences in city GDP growth are explained by both per capita GDP and population growth patterns

Drivers of MGI Cityscope city GDP growth[1], 2007–25

Compound annual growth rate, %



1 Predicted real exchange rate.
NOTE: Numbers may not sum due to rounding.
SOURCE: McKinsey Global Institute Cityscope 1.0

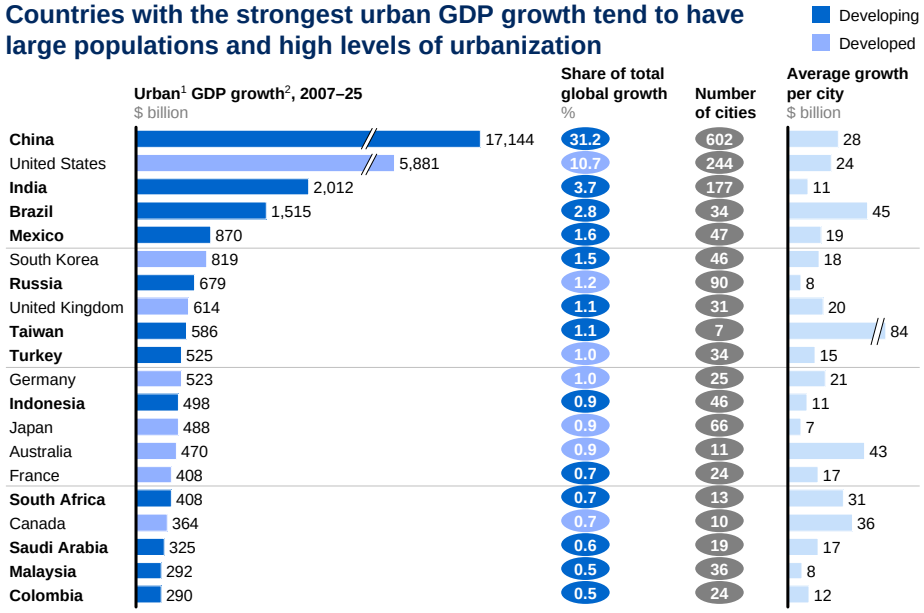
Companies should look at clusters of cities for market opportunities

Identifying the largest global growth pockets is critical, but choosing the ones that a company should go after requires assessing the opportunities against the costs of reaching each urban market. For most companies without a truly global presence, some geographic prioritization makes sense.

The most immediate question that many companies will ask themselves is how countries are likely to rank based on their urban market size. Using this lens, the developed economies of United States, South Korea, and the United Kingdom will rank in the top ten of countries whose cities will drive global GDP growth between 2007 and 2025. However, the other seven places in this top ten ranking are emerging markets that will together contribute around 40 percent of global growth (Exhibit 23).

Exhibit 23

Countries with the strongest urban GDP growth tend to have large populations and high levels of urbanization


Developing
Developed
Urban[1] GDP growth[2], 2007–25
$ billion
Share of total global growth
%
Number of cities
Average growth per city
$ billion
China 17,144 31.2 602 28
United States 5,881 10.7 244 24
India 2,012 3.7 177 11
Brazil 1,515 2.8 34 45
Mexico 870 1.6 47 19
South Korea 819 1.5 46 18
Russia 679 1.2 90 8
United Kingdom 614 1.1 31 20
Taiwan 586 1.1 7 84
Turkey 525 1.0 34 15
Germany 523 1.0 25 21
Indonesia 498 0.9 46 11
Japan 488 0.9 66 7
Australia 470 0.9 11 43
France 408 0.7 24 17
South Africa 408 0.7 13 31
Canada 364 0.7 10 36
Saudi Arabia 325 0.6 19 17
Malaysia 292 0.5 36 8
Colombia 290 0.5 24 12

1 Includes full Cityscope of ~2,000 cities.
2 Predicted real exchange rate.
SOURCE: McKinsey Global Institute Cityscope 1.0

Another option is to build strategy around selected city clusters—groups of target cities located within a manageable radius of 200 to 500 kilometers. In addition to covering markets within the metropolitan areas around the cities, companies can reach smaller cities and even rural areas in close proximity at relatively low incremental cost. This is an approach used by some companies to target regional markets with different preference and purchase behavior. McKinsey analysis of China and India suggests that a strategy based on clusters of cities can be an effective approach to entering these large markets, too.

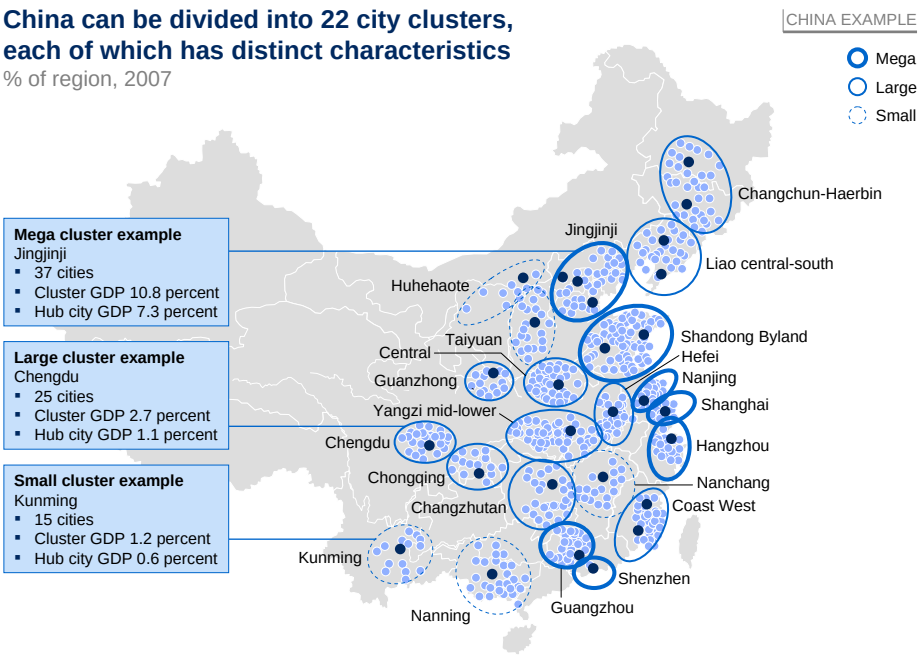
In China, the relevance of large emerging geographic clusters is increasing steadily as income differences across city tiers become less striking. These regional urban markets have distinct characteristics in terms of their demographics, industry structure, and consumer profiles, and companies need to take account of these in tailored strategies. McKinsey has identified 22 clusters in China, an approach that has led to a range of insights related to differences in growth opportunities, consumption profiles and consumer attitudes, brand loyalty, and market dynamics (Exhibit 24). For instance, China's clusters vary widely in their wealth; per capita GDP in the cluster around Shanghai is triple that of the inland cluster that McKinsey terms the Yangzi mid-lower, offering very different growth opportunities between the two. And market dynamics and consumer attitudes range widely, too. Shanghai has eight times the density of hypermarkets that Yangzi mid-lower has; consumers in the Liao central-south cluster have three times the price sensitivity of their counterparts in Yangzi mid-lower, and the impact of word of mouth on buying behavior is five times as high (Exhibit 25).

Exhibit 24

China can be divided into 22 city clusters, each of which has distinct characteristics

% of region, 2007

CHINA EXAMPLE

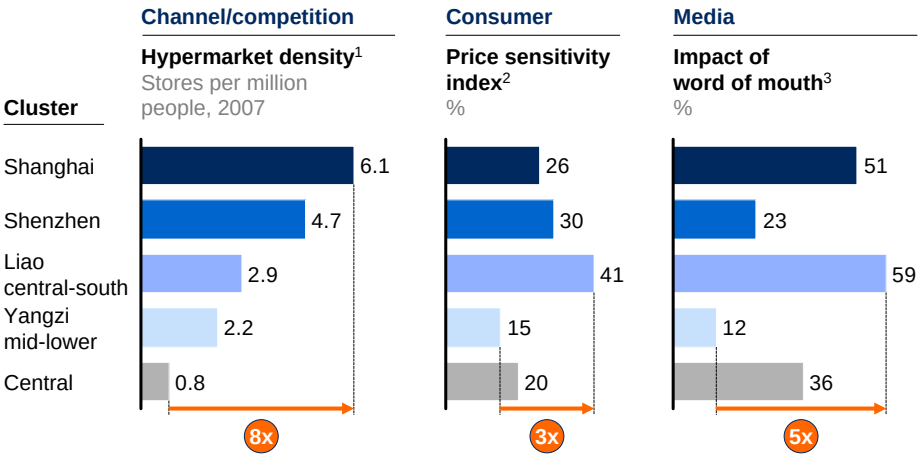


SOURCE: McKinsey Insights China; McKinsey Global Institute analysis

Exhibit 25

Chinese cluster market dynamics differ significantly

CHINA EXAMPLE



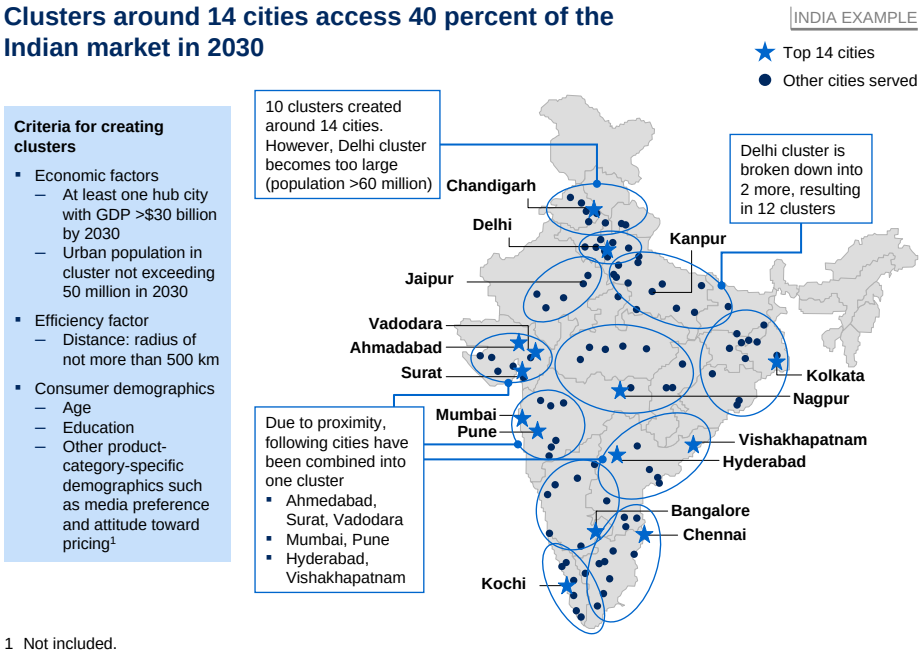
1 Leading hypermarkets (totaling 19): Wal-Mart, Carrefour, Tesco, Metro, Auchan, Trustmart, RT-Mart, E-mart, Lotus, Vanguard, Beijing Hualian, Dashang, Wumart, Lianhua Century Mart, GMS, A. Best, Wushang, Wenfeng, and Times.
2 Includes only samples with monthly household incomes of 3,000 to 8,000 renminbi, to eliminate the influence of income difference.
3 Percentage of respondents who received product or service information from family or friends in the past two months, see sources as credible, and will pay attention to the information.

SOURCE: McKinsey Insights China

India, given its relatively early stage of urbanization, is an economy where a cluster-based strategy can also be very attractive. In fact, McKinsey has identified 14 major clusters of cities that capture significant shares of the country's population and GDP. By homing in on these 14 urban agglomerations, businesses would cover 17 percent of the country's total population—rural and urban—and 40 percent of the nation's GDP in 2030 (Exhibit 26).

Exhibit 26

Clusters around 14 cities access 40 percent of the Indian market in 2030



1 Not included.
SOURCE: McKinsey India Urbanization Econometric Model

□ □ □

Companies looking for fresh opportunities around the world economy need to make cities a central part of their thinking—and not just the megacities that are household names but specifically the next tier of fast-growing urban centers that will be increasingly important drivers of global growth. Regardless of the size of the world's most dynamic cities, the more businesses understand about cities' demographic evolution, household trends, and incomes, the better their chances of successfully targeting the most promising prospects in their industries.

Appendix: Technical notes

These technical notes provide details of the definitions and methodologies that we have employed in this report. We address the following topics:

1. Compiling the MGI Cityscope list of cities and their population and GDP data
2. Average household size and number of households in cities
3. Demographic structure of cities
4. Household income distribution in cities
5. Exchange rates used in GDP estimates
6. Uncertainty around our growth projections

1. COMPILING THE MGI CITYSCOPE LIST OF CITIES AND THEIR POPULATION AND GDP DATA

How we define "cities" in the database

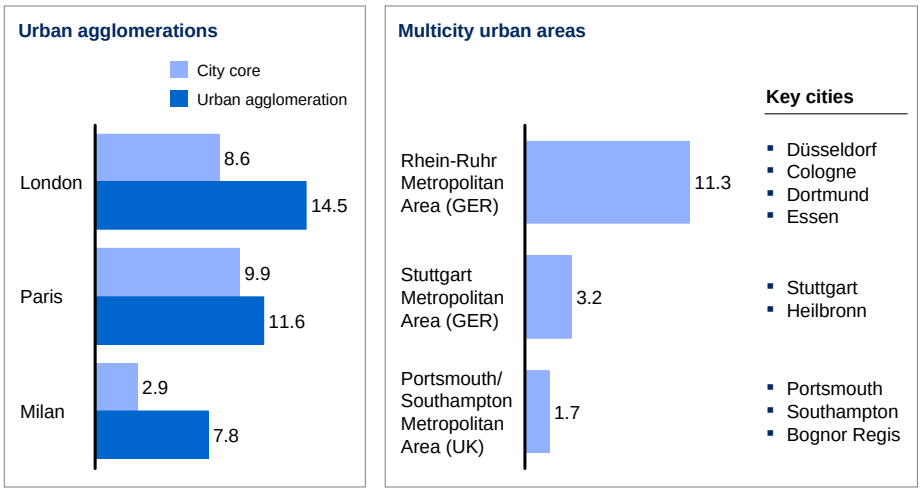
To create an initial pool of cities on which to base our analysis, we selected all cities with a population of 150,000 or more in the United States and Western Europe, and cities with 200,000 or more in the rest of the world. Where possible, the cities in the database refer to integrated metropolitan areas rather than specific city jurisdictions, aggregating neighboring cities into a single urban center where appropriate. Examples include Rhein-Ruhr in Germany; Los Angeles, Long Beach, and Santa Ana in California; and Mumbai and Thane in India.[20] This results in a relatively broad definition of city, denoting where people live and work regardless of distances, and in which the city center is only a fraction of the size of the total urban parameters in terms of both population and area (Exhibit A1).

Exhibit A1

Cities comprise both enlarged urban agglomerations around city cores and multicity urban areas

EUROPEAN CITIES EXAMPLE

Population, 2007
Million



SOURCE: Eurostat; ESPON; Statistics Norway; Swiss Federal Statistical Office; McKinsey Global Institute Cityscope 1.0

20 We constructed Western European integrated metropolitan areas using the Functional Urban Area definition from Eurostat's ESPON project. We constructed US metropolitan areas using the US Bureau of Economic Analysis' Metropolitan Statistical Area definition. We drew on our regional expertise in India and China to construct integrated metropolitan areas.

Sources and methodologies for population data

- **Population data for base year 2007**. We chose 2007 as the base year for data collection because statistical data by urban area was largely not available for more recent years. The raw population data underlying our estimates came from four sources:

  — MGI China and India models. MGI has conducted extensive studies on cities within India and China, and our database draws on these efforts for the cities in these two countries.[21]

  — We used national statistical offices data for most other countries. For instance, we drew on European city data at the NUTS-3 level from Eurostat, the European Union's statistical bureau, and then aggregated into Functional Urban Areas using definitions from Eurostat's ESPON project; data on US Metropolitan Statistical Areas came from the US Bureau of Economic Analysis (BEA); and Russian data came from RosStat, the national statistical agency.

  — The United Nations' *World Urbanization Prospects: The 2007 Revision Population Database*.

  — Other external data sources. We relied on data from Thomas Brinkhoff, City Population (www.citypopulation.de); World Gazetteer (www.world-gazetteer.com); and C-GIDD (https://www.cgidd.com/).

- **Population projections for 2025.** We obtained population growth forecasts for 2025 from four sources:

  — MGI India and China models.

  — Moody's Analytics for US cities.

  — Eurostat for Western European cities.

  — The United Nations' *World Urbanization Prospects: The 2007 Revision Population Database*.

  — In the case of cities for which there were no forecasts available, we estimated city population using the average urban population growth of other cities within the same country.

21 *Preparing for China's urban billion*, March 2009; *India's urban awakening: Building inclusive cities, sustaining economic growth*, April 2010. Both are available at www.mckinsey.com/mgi.

Sources and methodologies for city GDP data

- **GDP data for base year 2007**. We compiled the GDP data for 2007 using four different data sources:

  — MGI India and China models.

  — We used national statistical offices data for many countries. For instance, European city data were drawn at the NUTS-3 level from Eurostat, the European Union's statistical bureau, and then aggregated into Functional Urban Areas using definitions from Eurostat's ESPON project; data on US cities came from the BEA; we used Latin American national statistical offices for larger countries in that region, including most capital cities.

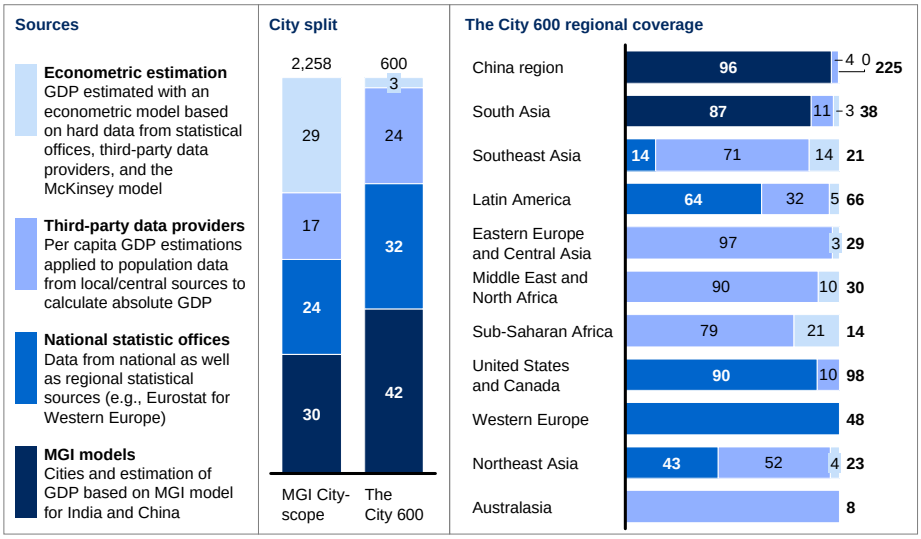
  — We relied on data from C-GIDD for selected cities.

  — In the case of cities for which GDP data were not available from any of these sources, we estimated 2007 GDP using an econometric model based on all the statistical data gathered from the sources we have cited that allowed us to predict the GDP of a city using the city population and the average per capita GDP for cities in the region. We structured the model to include regional variables that incorporated the differences in per capita GDP in cities in different regions (Exhibit A2).

Exhibit A2

MGI used four sources to gather city GDP figures for 2007

GDP estimation approach
%; number of cities


Sources
Econometric estimation
GDP estimated with an econometric model based on hard data from statistical offices, third-party data providers, and the McKinsey model
Third-party data providers
Per capita GDP estimations applied to population data from local/central sources to calculate absolute GDP
National statistic offices
Data from national as well as regional statistical sources (e.g., Eurostat for Western Europe)
MGI models
Cities and estimation of GDP based on MGI model for India and China
City split
2,258
600
29
17
24
30
3
24
32
42
MGI City-scope
The City 600
The City 600 regional coverage
China region 96 4 0 225
South Asia 87 11 3 38
Southeast Asia 14 71 14 21
Latin America 64 32 5 66
Eastern Europe and Central Asia 97 3 29
Middle East and North Africa 90 10 30
Sub-Saharan Africa 79 21 14
United States and Canada 90 10 98
Western Europe 48
Northeast Asia 43 52 4 23
Australasia 8

NOTE: Numbers may not sum due to rounding.
SOURCE: McKinsey Global Institute Cityscope 1.0

- **GDP projections for 2025.** Across all cities, our underlying country-level GDP growth assumption was the average of GDP growth projections from the International Monetary Fund, Global Insight, and McKinsey's Long-Term Growth Model.[22] We estimated city-specific GDP growth rates from 2007 to 2025 using three approaches, reflecting whether past GDP growth data were available for the city or not.

  — MGI China and India urbanization models reflecting our in-depth analysis of past growth rates and current population and productivity trends, adjusted for the latest aggregate growth assumptions.

  — For other countries where historical per capita GDP growth rates were available (the United States, Western Europe, and some cities in Latin America), we projected a per capita GDP growth rate for each city by adjusting the national growth rate upward or downward proportionally based on past relative per capita GDP growth performance, yet limited the gap with the national per capita GDP growth rate to 25 percent or less. This approach implicitly assumes that cities that have outperformed (or underperformed) their peers are more likely to continue to do so, but that exceptional deviations from national patterns are not likely to be sustainable.

  — We derived a city's GDP in 2025 by multiplying projected per capita GDP by city population. As a result, a city's GDP growth rate can differ from national growth rates because of differences in population growth and/or because of differences in projected per capita GDP growth.

  — For the rest of the regions, we projected city per capita GDP growth to 2025 using national average per capita GDP and multiplying by the 2025 population. This approach assumes that each city's per capita GDP gap remains fixed to the national average, yet a city's GDP growth does not need to be identical to national growth because of differences in population growth.

22 The real compound annual growth rates for GDP over the period 2007 to 2025 for selected regions is 8.3 percent in China, 7.8 percent in India, 1.4 percent in Western Europe, 4.0 percent in Latin America, and 2.4 percent in the United States.

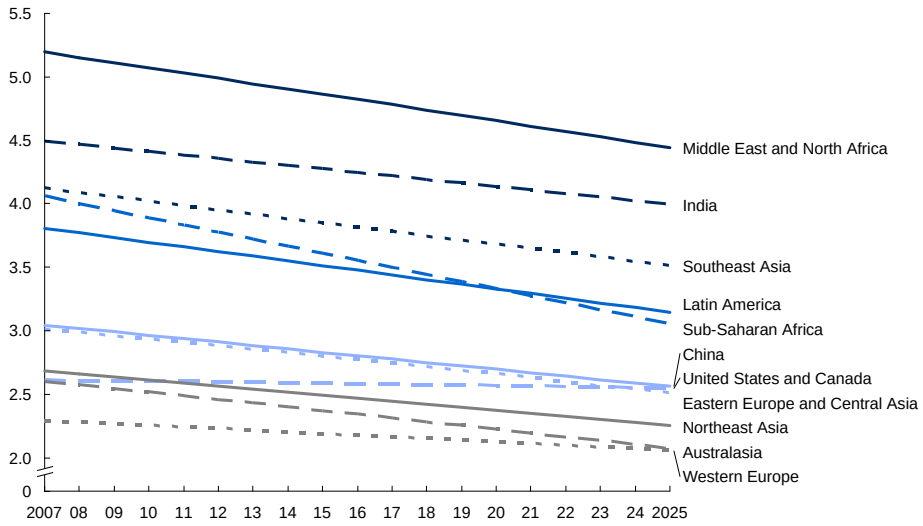
2. AVERAGE HOUSEHOLD SIZE AND NUMBER OF HOUSEHOLDS IN CITIES

- **Number of households in base year 2007**. We used a variety of sources and methods to gather household data for our base year of 2007:
  - — MGI's India and China models for data in those two economies.
  - — National sources for average household size by city, and then dividing city population by the average number of people per household.
  - — Other external data sources including Global Demographics (http://global-dem.com) and C-GIDD to obtain average household estimates and apply those to city populations.
  - — When household data were not available, we estimated the average household size by using the average among cities of similar size in a particular nation; when that information was unavailable, we used average urban household size in the country and, again, applied that to the overall population.
- **Number of households projections for 2025.** We estimated the 2025 average household size in each city with our demographic model, first estimating parameters linking birth rates, death rates, and household sizes and then using those estimates to extrapolate forward. The model was estimated using past UN demographic data (including net birth and death dates) at the national level, including regional variables to account for regional variances in household patterns. We then used the estimated parameters and UN forecasts on birth rates and death rates to predict household size changes to 2025 by country. Last, we predicted the decline in individual cities' household size from 2007 with adjusted estimates of household size decline reflecting convergence to the regional minimum (Exhibit A3).

Exhibit A3

MGI calculated the evolution of urban household size globally

Average household size, 2007–25
People



SOURCE: McKinsey Global Institute Cityscope 1.0

3. DEMOGRAPHIC STRUCTURE OF CITIES

- **Demographic data for base year 2007**. We gathered data using a number of methods and consolidated five-year age segments into three categories by age: children (aged below 15), the working-age population (aged 15 to 64), and the older population (65 and older).
  - MGI's India and China models.
  - National statistical offices provided the data for most cities in the City 600.
  - For cities for which data were unavailable, we took the weighted average of a particular demographic segment of all other cities in that country. For some countries, city-level data were not available, and we relied on an age distribution for all urban areas in the country. For a few countries, urban age distribution was not available, and we estimated those based on both age distributions in cities within the same region; and the national age distribution. For all of these, we drew on data from national statistical offices and the United Nations' Demographic Yearbook.
- **Demographic projections for 2025.** For 2025 forecasts, we used three sources:
  - MGI's India and China models.
  - Our demographic model predicted city age distribution in 2025 based on 2007 age distribution and expected growth rates of each age group to 2025. We estimated growth rates from national projections using the United Nations' Medium Variant demographic forecasts adjusted for city-level differences in initial age distribution and each city's population growth.
  - We compared our city-level demographic projections against national sources for those cities for which future age projections were available, as well as to projections from Moody's Analytics for US cities, and to Global Demographics for those cities for which projections were available.

4. HOUSEHOLD INCOME DISTRIBUTION IN CITIES

- **Income distribution data for base year 2007.**[23] We used four different sources to gather 2007 household income distributions for cities, which we applied to our city-level household data to create four income segments based on their spending power—struggling, aspiring, consuming, and global (Exhibit A4).

  — For China and India, we drew on MGI's past urbanization and consumer model data.

  — National statistical offices data for selected countries, including the US Census Bureau for the United States, Statistics Canada, Office of National Statistics in the United Kingdom, Statistics Netherlands, and INSEE in France.

  — C-GIDD income distribution data for specific cities.

  — Global Demographics' average urban income distribution data within countries.

  — Where data were unavailable from any of these sources, we applied the income distribution in other cities for which data were available in the same country. In some cases where no urban average was available, we applied the income distribution of the country (largely countries with a high urban population).

Exhibit A4

MGI compiled income distributions into segments related to spending power

	Household income $ PPP, 2005 levels
Global	More than $70,000
Consuming	$20,000 to $70,000
Aspiring	$7,500 to $20,000
Struggling	Below $7,500

SOURCE: McKinsey Global Institute Cityscope 1.0

23 We defined household income broadly to cover not only wage or salary income but all other sources of income (real estate and capital income, government and family transfers). In some emerging economies, we relied on household consumption data to estimate disposable income.

- **Income distribution projections for 2025.** We derived 2025 income distributions for cities using the historical path of an income segment and then adjusted this by projected future changes in per capita GDP (Exhibit A5).

  — Using both national and G-CIDD data on income distribution evolution in the past ten years, we predicted the evolution of income distribution by adjusting past patterns of change with expected per capita GDP growth.

  — For cities where data were unavailable, we applied the average for cities of a similar size within the same country. Where there were no cities of a similar size we applied national averages.

Exhibit A5

MGI extrapolated 2025 income distribution figures based on historical income distribution evolution and forward-looking per capita GDP growth

ILLUSTRATIVE

Consumer category	Income segment $ PPP	Million households 2007	Million households 2025
Global	100,000+	0	0
	70,000–100,000	0	1
Consuming	35,000–70,000	1	4
	20,000–35,000	3	15
Aspiring	10,000–20,000	16	44
	7,500–10,000	16	16
Struggling	5,000–7,500	28	15
	2,000–5,000	33	5
	1,000–2,000	2	0
	<1,000	1	0

SOURCE: McKinsey Global Institute Cityscope 1.0

5. EXCHANGE RATES USED IN GDP ESTIMATES

Our database includes three different GDP measures for all cities, each of which we express in US dollars (our unit currency) but derived using different exchange rates. The first of these is GDP measured at 2007 market exchange rates, the second is GDP measured at 2007 PPP exchange rates, and the third is GDP measured at predicted RER in 2007 and 2025. Each one is useful for different purposes. However, we have included the predicted RER figures as our base case in the growth projections in this report. The reason is that this most closely approximates the expected dollar value of revenues or income earned in different currencies.

The RER for 2007 is the market exchange rate. We predict the RER for 2025 from differences in per capita GDP growth rates. The faster per capita GDP grows, the more rapidly is the relative cost of non-tradable goods and services likely to increase, leading to a higher dollar value of local sales. We account for this factor by assuming a relative RER appreciation proportional to the gap in per capita GDP growth relative to the growth of the United States, adjusted for the share of nontradables in the economy. The RER predicted for 2025 therefore indicates the combined effect of changes in local prices and market exchange rates that impact the dollar value of GDP or income in each country.[24]

6. UNCERTAINTY AROUND OUR GROWTH PROJECTIONS

Projecting the economic and demographic evolution of cities over the next 15 years is inherently subject to multiple sources of uncertainty and companies need to test the robustness of their business decisions against a broader set of plausible scenarios.

The sources of uncertainty in city-level projections start with the fact that the initial data for 2007 is limited for many cities, particularly in some emerging market regions. For growth projections, the GDP growth assumptions underlying predicted GDP in 2025 are perhaps the most obvious source of doubt. In comparison with national growth projections, demographic projections at the city level are subject to another layer of uncertainty—migration within and between regions can lead to quite different population growth rates and shifts in age distribution in individual cities. In addition, how currencies strengthen provide an additional source of uncertainty. Forecasting the number of households by income segments compounds all of this. Our projections for city growth should therefore be seen as reflecting our best estimates of the likely outcomes, subject to bands of uncertainty.

Despite these difficulties, we have chosen to focus in this report on the patterns of city evolution that emerge from studying point estimates in our MGI Cityscope database. Overall global patterns are robust to reasonable sensitivity analyses around our base assumptions. Given the limited global data available at the city level that exists today, we hope that our focus on evolving patterns in global urban landscape contributes to our collective understanding of the evolution of the global economy.

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24 Take the case of India as an example. India's real per capita GDP in local currency is expected to grow 6.6 percent per annum to 2025. This is 5.2 percentage points higher than expected US real per capita GDP growth of 1.4 percent per annum. Applying real appreciation to the share of nontradables (38 percent) in the economy, this would imply an additional RER appreciation of 2 percent per annum. See P.A. Samuelson, "Theoretical notes on trade problems," *Review of Economics and Statistics*, 1964; and B. Balassa, "The purchasing-power parity doctrine: A reappraisal," *Journal of Political Economy*, 1964.

Bibliography

A. T. Kearney, *Global Cities Index*, 2008.

Baghai, Mehrdad, Sven Smit, and Patrick Viguerie, "The granularity of growth," *The McKinsey Quarterly*, May 2007 (www.mckinseyquarterly.com).

Balassa, B., "The purchasing-power parity doctrine: A reappraisal," *Journal of Political Economy*, 1964.

Bräuninger, Michael, and Silvia Stiller, "Europe's leading cities—success factors and policy perspectives," *Intereconomics: Review of European Economic Policy*, Springer, Volume 42, Number 6, pp. 335–340, November 2007.

Brookings Institution, *Global Metro Monitor: The Path to Economic Recovery*, December 2010.

Bugliarello, G., "Megacities and the developing world," *The Bridge*, Volume 29, Number 4, pp. 19–26, 1999.

Carlino, Gerald A., and Albert Saiz, *Beautiful city: Leisure amenities and urban growth*, Federal Reserve Bank of Philadelphia Working Paper No. 08–22, September 2008.

Cervero, Robert, "Efficient urbanization: Economic performance and the shape of the metropolis," *Urban Studies*, Volume 38, Number 10, pp. 1651–1671, 2001.

De Groot, Henri L. F., Jacques Poot, and Martijn Smit, *Agglomeration, innovation and regional development: Theoretical perspectives and meta-analysis*, Tinbergen Institute Discussion Paper No. 07–079/3, October 2007.

Diallo, A., and Q. Wodon, "Demographic transition towards smaller household sizes and basic infrastructure needs in developing countries," *Economics Bulletin*, Volume 15, Number 11, pp. 1–11, 2007.

Dynan, Karen E., Wendy Edelberg, and Michael G. Palumbo, "The effects of population aging on the relationship among aggregate consumption, saving, and income," *American Economic Review: Papers & Proceedings*, Volume 99, Number 2, pp. 380–386, 2009.

Elizondo, Raul Livas, and Paul R. Krugman, *Trade policy and the third world metropolis*, National Bureau of Economic Research, NBER Working Papers, Number 4238, December 1992.

Ellis, Luci, and Dan Andrews, *City sizes, housing costs, and wealth*, Reserve Bank of Australia, Research Discussion Paper, RDP 2006–12, October 2001.

ESPON project 1.4.3, *Study on Urban Functions Final Report*, March 2007.

Frankel, Jeffrey, *The Balassa-Samuelson Relationship and the Renminbi*, Harvard University, December 2006.

Fujita, Masahisa, Paul R. Krugman, and Anthony J. Venables, *The Spatial Economy: Cities, Regions and International Trade*, MIT Press, 1999.

Gill, Indermit S., and Chor-Ching Goh, "Scale economies and cities," *World Bank Research Observer*, Volume 25, Issue 2, pp. 235-262, 2010.

Glaeser, Edward, "The new economics of urban and regional growth," in Gordon L. Clark, Maryann P. Feldman, and Meric S. Gertler, Eds., *The Oxford Handbook of Economic Geography*, Oxford University Press, Oxford, pp. 83–98, 2003.

Glaeser, Edward L., Jose A. Scheinkman, and Andrei Shleifer, "Economic growth in a cross-section of cities," *Journal of Monetary Economics*, Elsevier, Volume 36, Number 1, pp. 117–143, August 1995.

Glasmeier, Amy K., "Economic geography in practice: Local economic development policy," in Gordon L. Clark, Maryann P. Feldman, and Meric S. Gertler, Eds., *The Oxford Handbook of Economic Geography*, Oxford University Press, Oxford, pp. 559–579, 2000.

Greater Paris Investment Agency and KPMG, *Global Cities Investment Monitor*, June 2010.

Heller, Peter, *People and Places: Can They Align to Bring Growth to Africa?* Center for Global Development, September 2010.

Henderson, Vernon, *The effects of urban concentration on economic growth*, National Bureau of Economic Research, Working Paper 7503, January 2000.

Horioka, Charles Yuji, "Aging and saving in Asia," *Pacific Economic Review*, Volume 15, Number 1, pp. 46–55, 2010.

Jackson, Richard, Rebecca Strauss, and Neil Howe, *Latin America's Aging Challenge: Demographics and Retirement Policy in Brazil, Chile, and Mexico*, Center for Strategic and International Studies, March 2009.

Jiang, L., and B.C. O'Neill, "Impact of demographic trends on US household size and structure," *Population and Development Review*, Volume 33, pp. 567–591, 2007.

Jin, David, et al., *Winning in Emerging-Market Cities: A Guide to the World's Largest Growth Opportunity*, Boston Consulting Group, September 2010.

Just, Tobias, *Megacities: Boundless Growth?* Deutsche Bank Research, March 12, 2008.

Kalwija, Adriaan, and Wiemer Salverdab, "The effects of changes in household demographics and employment on consumer demand patterns," *Applied Economics*, Volume 39, Number 11, pp. 1447–1460, 2007.

Kim, Sukkoo, *The reconstruction of the American urban landscape in the twentieth century*, National Bureau of Economic Research, Working Paper 8857, April 2002.

Kinsella, Kevin, and Wan He, *An Aging World: 2008*, International Population Reports, US Department of Health and Human Services, June 2009.

Kneebone, Elizabeth, *Job Sprawl Revisited: Changing Geography of Metropolitan Employment*, The Brookings Institution, April 2009.

Leahy, Elizabeth, et al., *The Shape of Things to Come: Why Age Structure Matters to a Safer, More Equitable World*, Population Action International, April 2007.

Leahy, Elizabeth, Beatrice Daumerie, and Karen Hardee, *The Shape of Things to Come: The Effects of Age Structure on Development*, Population Action International, April 2010.

McKinsey Global Institute, *India's urban awakening: Building inclusive cities, sustaining economic growth*, April 2010.

McKinsey Global Institute, *Preparing for China's urban billion*, March 2009.

OECD, *Competitive Cities in the Global Economy*, OECD Territorial Reviews, 2006.

OECD and CDRF, *Trends in Urbanisation and Urban Policies in OECD Countries: What Lessons for China?* OECD Publishing, 2010.

PricewaterhouseCoopers, *Cities of Opportunity*, 2010.

Samuelson, P. A., "Theoretical notes on trade problems," *Review of Economics and Statistics*, Volume 46, Number 2, pp. 145–154, 1964.

United Nations, *World Urbanization Prospects, the 2007 Revision*, 2008.

United Nations, *World Urbanization Prospects, the 2009 Revision*, 2010.

UN-Habitat, "Urban trends: Wealth of cities," in *State of the World's Cities 2010/2011: Bridging the Urban Divide*, March 2010.

Woetzel, Jonathan, Geng Xiao, and Lan Xue, *The Urban Sustainability Index: A New Tool for Measuring China's Cities*, Urban China Initiative, November 2010.

Yusuf, Shahid, *About urban mega regions: Knowns and unknowns*, World Bank Policy Research Working Paper 4252, June 1, 2007.

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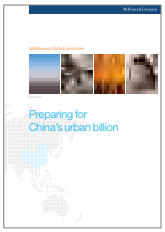
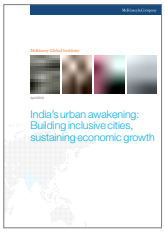


Preparing for China's urban billion (March 2009)

By pursuing a more concentrated urbanization path guided by action to boost urban productivity, China's local and national policy leaders would minimize the pressures of urbanization and maximize the economic benefits of urban expansion.



India's urban awakening: Building inclusive cities, sustaining economic growth (April 2010)

India's lack of effective policies to manage its rapid and large-scale urbanization could jeopardize the nation's growth trajectory. But if India pursues a new operating model for its cities, it could add as much as 1 to 1.5 percent to annual GDP growth.

Building globally competitive cities: The key to Latin American growth (Forthcoming in 2011)

Latin America could triple GDP by 2025 if it boosts weak productivity growth and improves the management of its cities. Urban centers have been powerful growth drivers, but that contribution could be at risk because many large cities have run into diseconomies of scale. Using MGI's new Urban Performance Index (UPI), urban managers can target reform and learn from others' best practice.

Growth and renewal in the United States: Retooling America's economic engine (February 2011)

In order to drive growth and competitiveness, the United States needs to boost labor productivity growth to a rate not seen since the 1960s. It is important that the United States returns to the more broadly based productivity growth of the 1990s when strong demand and a shift to products with a higher value per unit helped to create jobs even as productivity was growing.

Farewell to cheap capital? The implications of long-term shifts in global investment and saving (December 2010)

The bursting of the global credit bubble followed three decades in which capital became progressively cheaper. MGI analysis suggests that the long-term trends in low interest rates will reverse in the decades ahead. The world may be entering a new era in which the desire to invest exceeds the willingness to save, pushing real interest rates up.

Beyond austerity: A path to economic growth and renewal in Europe (October 2010)

With multiple pressures on growth and constrained public finances, Europe needs structural reform even to match past GDP growth rates. Parts of Europe have begun to reform with demonstrable success. If the rest of Europe emulated their best practice, the region could add 4 to 11 percent to per capita GDP, without cutting holidays and leave.

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